SIBYLLE KURZ-KÜMMERLE

Verhaltensmedizin in der Zahnheilkunde

Eine Untersuchung zur Interaktion zwischen angstbezogenem Verhalten bei Zahnarzt und Kind und zur Vorhersage von Risikofaktoren für Angstverhalten von Kindern bei Zahnbehandlungen

LITERATURVERZEICHNIS UND ANHANG

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Anhang

Seite

1. BPChL 1
2. SAM 3
3. CFSSDS. 8
4. CFSS. 9
5. NCBRS 12
6. BPRS. 13
7. Stichprobe Kinder 18
8. Stichprobe Zahnärzte 19
9. TA 20
10. PRCS 21
11. Demographische Daten und Professionelle Erfahrung der Zahnärzte . . . 23
12. Angst- und Fähigkeitsratings der Zahnärzte . 25
13. CCM 26
14. Information der Kinder über die Zahnbehandlung 31
15. Fragebogen zum Kausalitätskonzept 32
16. Fear Thermometer 35
17. Globale Ratings 36
18. Demographische Daten und bisherige Zahnarzterfahrung der Kinder 37
19. Parents Questionnaire 40
20. CDQ 43
21. Information der Mutter über die Zahnbehandlung 52
22. Einverständnis des Zahnarztes 55
23. Einverständnis der Mutter 56
24. Mittelwerte und Streuungen verschiedener Kontrollvariablen 57
25. Versuchspersonencharakteristika 58
26. Altersverteilung der Kausalitäts-Konzepte . . 59
27. DDST 60
28. Multiple Regression 61
29. Selektionsmodelle für die multiplen Regressionsanalysen 63
30. Schaubilder 68
31. Graphische Zusammenfassung 78

Anhang 1 Behavior Problem Checklist

Please indicate which of the following have been problems for your child during the last four weeks. If an item does not constitute a problem encircle the zero, if an item constitutes a mild problem encircle the one; if an item constitutes a severe problem, encircle the two. Please complete every item. Remember to consider your child's behavior only during the last four weeks.

0 1 2 1. oddness, bizarre behavior

0 1 2 2. restlessness, inability to sit still

0 1 2 3. attention-seeking, "show-off" behavior

0 1 2 4. stays out late at night

0 1 2 5. doesn't know how to have fun; behaves like a little adult

0 1 2 6. self-consciousness, easily embarrassed

0 1 2 7. fixed expression, lack of emotional reactivity

0 1 2 8. disruptiveness, tendency to annoy and bother others

0 1 2 9. feelings of inferiority

0 1 2 10. steals in company with others

0 1 2 11. boisterousness, roudiness

0 1 2 12. crying over minor annoyances and hurts

0 1 2 13. preoccupation, "in a world of his own"

0 1 2 14. shyness, bashfulness

0 1 2 15. social withdrawal, preference for solitary activities

0 1 2 16. dislike for school

0 1 2 17. jealousy over attention paid other children

0 1 2 18. belongs to a gang

0 1 2 19. repetitive speech

0 1 2 20. short attention span

0 1 2 21. lack of self-confidence

0 1 2 22. inattentiveness to what others say

0 1 2 23. easily flustered and confused

0 1 2 24. incoherent speech

0 1 2 25. fighting

0 1 2 26. loyal to delinquent friends

0 1 2 27. temper tantrums

0 1 2 28. reticence, secretiveness

0 1 2 29. truancy from school

0 1 2 30. hypersensitivity, feelings easily hurt

0 1 2 31. laziness in school and in performance of other tasks

0 1 2 32. anxiety, chronic general fearfulness

0 1 2 33. irresponsibility, undependability

0 1 2 34. excessive daydreaming

0 1 2 35. masturbation

0 1 2 36. has had companions

0 1 2 37. tension, inability to relax

0 1 2 38. disobedience, difficulty in disciplinary control

0 1 2 39. depression, chronic sadness

0 1 2 40. uncooreretiveness in group situations

0 1 2 41. aloofness, social reserve

0 1 2 42. passivity, suggestibility, easily led by others

0 1 2 43. clumsiness, awkwardness, poor muscular coordination

0 1 2 44. hyperactivity, "always on the go"

0 1 2 45. distractibility

0 1 2 46. destructiveness in regard to his own and/or other's property

0 1 2 47. negative thinking, tendency to do the opposite of what's requested

0 1 2 48. impertinence, sausiness

0 1 2 49. sluggishness, lethargy

0 1 2 50. drousiness

0 1 2 51. profane language, swearing, cursing

0 1 2 52. nervousness, jitteriness, jumpiness, easily startled

0 1 2 53. irritability, hot tempered, easily aroused to anger

0 1 2 54. enuresis, bed-wetting

0 1 2 55. often has physical complaints, e.g. headaches, stomach aches

SAM - Instructions for Experimenter

The dimensions are always presented in the following order:

1. happy - unhappy
2. excited - calm
3. controlled -in control

The previous strip is always removed before the next is presented. The dimension is always labeled verbally as the strip is presented.

Do not say things within brackets.

Now I will ask you to tell me how you feel about some things. I'll want you to tell me whether you are happy or not, excited or calm, or how important you feel. I'll want you to tell me as exactly as you can. This is not always easy to do with words. To help you show me how you feel, we'll use these pictures [show the happy-unhappy set]. He (she) is called SAM (SAMANTHA) and SAM can be used to show three different ways of feeling: whether you're happy or unhappy, calm or excited and how important you feel.

I. These pictures show how happy SAM is, from most to least, all the way from being really pleased to being very unhappy. All the little differences in between are included in the pictures [point out the dimension].
At one end, SAM feels the most happy [point]. When you feel the same as SAM, really happy, point at this end [point].
This is the way SAM looks when you feel the most unhappy [point].
This is how SAM looks when you feel completely neutral, neither happy nor unhappy [point].

Now show me some of your feelings. Point on the picture that shows how you feel when something pretty good happens, like eating a desert. How would you feel if you fell and scraped your knee?
Sometimes you may have a feeling for which none of the SAM pictures tells just right. Sometimes you may feel a little unhappy, more than this but less than this [point]. If this happens, just point on the line between the pictures.

II. Sam can show other kinds of feelings. In this set of pictures, SAM changes from being very excited to completely calm [point]. You can show how excited you are by pointing on the picture that shows your feeling. When you point on this picture, you feel the most excited [point]. Now let's look at the other end of these SAM pictures. This is the way SAM looks when you feel the most relaxed, calm and sleepy, not at all aroused [point]. Of course, if you feel completely neutral, neither excited nor calm, point in the middle.
Now you show me some of your feelings. Where would you point if you were going to see a really good movie? How excited would you be? If someone called you a bad name?

III. This set of pictures shows the third kind of feeling that I'll ask you to tell me about. You can use SAM to tell me how important you feel. When you point on this picture, you feel the most important. When you feel the biggest, like the boss, point here [point]. Now look at the other end of these pictures. This is the way SAM looks when you feel small and cared for. When you feel the most controlled and influenced by others point here.

When you didn't feel either way, completely neutral, not at all the boss, but not cared for either, then you would point on the middle picture. Now show me some of your feelings. How did you feel the first day in school? What does it feel like when you win a game?

IV. Now I want you to show me your feelings using all three sets of SAM pictures. Show me on SAM how you would feel if you were going to see a really good movie [present the strips sequentially]. Show me on SAM how you would feel if you fell and scraped your knee [present all three strips sequently].

SAM

Happy-Unhappy Scale

+4 (Happy)	+3	+2	+1	0	-1	-2	-3	-4 (Unhappy)
9	8	7	6	5	4	3	2	1

Excited-Calm Scale

+4 (Excited)	+3	+2	+1	0	-1	-2	-3	-4 (Calm)
1	2	3	4	5	6	7	8	9

Controlled-In Control Scale

-4 (Controlled)	-3	-2	-1	0	+1	+2	+3	+4 (In Control)
1	2	3	4	5	6	7	8	9

SAM Instructions - Dental Study

Pre-treatment.

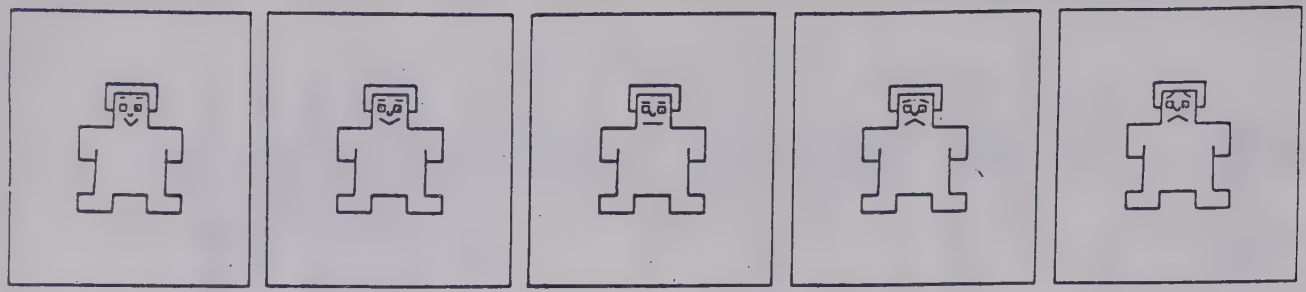
"I am going to use these scales to find out how you feel right now. The dentist is going to work on your teeth today. I want you to sit back, close your eyes, and imagine the dentist working on your teeth today."
[Let the child imagine for 30 seconds].
"Now, I want you to show me on SAM how you feel. (Present the happy-unhappy strip.) Point on the picture of SAM that best shows how happy you feel right now. (Present the excited-calm strip.) Point on the picture that best shows me how excited you feel right now. (Present the controlled-in control strip.) Point on the picture of SAM that best shows how in control you feel right now."

Don't forget to administer SAM when the cleaning of the teeth is over!

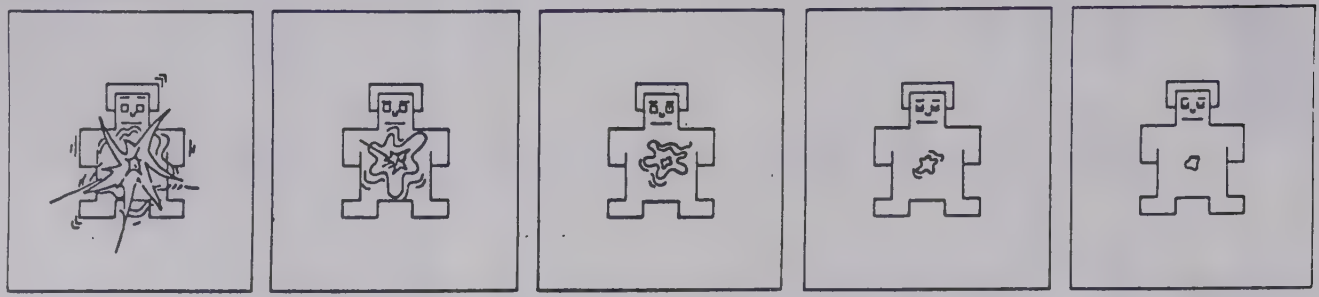
Post-treatment

"The dentist has finished working on your teeth today; I want you to think about that."
"I am going to use SAM to find out how you feel right now. Show me on SAM how you feel. (Present the happy-unhappy strip.). Point on the picture of SAM that best shows how happy you feel right now. (Present the excited-calm strip.) Point on the picture that shows how excited you feel right now. (Present the controlled-in control strip.) Point on the picture of SAM that best shows how in control you feel right now."

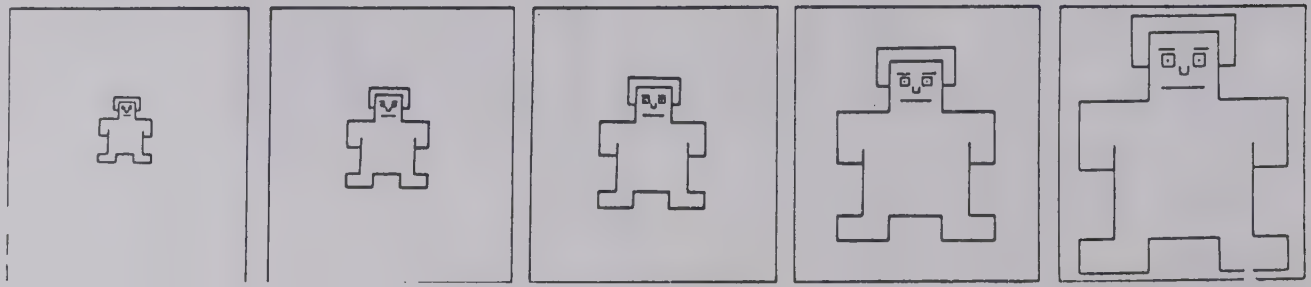
PLEASURE



AROUSAL



DOMINANCE



CHILDREN'S FEAR SURVEY SCHEDULE (CFSSDS)

Name _____

Age _____ Sex _____

Session _____

Child was:		
Cooperative	yes	no
Anxious aboutquestions	yes	no
Answered questions	yes	no
Unterstood questions	yes	no

Items	Not afraid at all 1	A little afraid 2	A fair amount 3	Pretty much afraid 4	Very afraid 5
1. dentists					
2. doctors					
3. injections (shots)					
4. having somebody examine your mouth					
5. having to open your mouth					
6. having a stranger touch you					
7. having somebody look at you					
8. the dentist drilling					
9. the sight of the dentist drilling					
10. the noise of the dentist drilling					
11. having somebody put instruments in your mouth					
12. choking					
13. having to go to the hospital					
14. people in white uniforms					
15. having the nurse clean your teeth					

CHILDREN'S FEAR SURVEY SCHEDULE (CFSS)

Name _____
Age _____ Sex _____
Session _____

Child was:
Cooperative yes no
Anxious about questions yes no
Answered questions yes no
Understood questions yes no

Items	Not afraid at all 1	A little afraid 2	A fair amount 3	Pretty much afraid 4	Very afraid 5
1. dentists					
2. dogs					
3. being laughed at					
4. doctors					
5. dark					
6. lightning					
7. thunder					
8. strangers					
9. loud noises					
10. getting caught out in the rain					
11. being late for school					
12. having to go up to black-board in front of class					
13. injections (shots)					
14. losing at a game					
15. being called on in class					
16. having somebody examine your mouth					
17. having to open your mouth					
18. being away from your mother					
19. having a stranger touch you					
20. having somebody look at you					
21. having the nurse clean your teeth					

Items	Not afraid at all	A little afraid	A fair amount	Pretty much afraid	Very afraid
22. The dentist drilling					
23. the sight of the dentist drilling					
24. the noise of a dentist's drill					
25. having somebody put instruments in your mouth					
26. crying in front of other children					
27. parents yelling at you					
28. hearing other children cry					
29. being in a crowd					
30. doing something new					
31. getting burned by a fire					
32. parents fighting					
33. getting a haircut					
34. spiders					
35. choking					
36. the sight of blood					
37. not being able to breathe					
38. rats					
39. having to go to the hospital					
40. ghosts					
41. having to eat the food I don't like					
42. getting lost					
43. Hearing my parents argue					
44. making mistakes					
45. people in white uniforms					

Items	Not afraid at all	A little afraid	A fair amount	Pretty much afraid	Very afraid
46. getting a poor grade in school					
47. being alone					
48. answering questions					
49. taking a test					
50. getting punished					

Name student _____

Name patient _____

Rater _____

Appointment _____

Rating - Instructions:

1. count the absolute frequency of each category over the whole time
2. measure the duration of each event in each category
3. write down the total time that you scored (shortest unit .5 sec.)

Scoring - Instructions:

1. add up how often each category was scored
2. add up the durations of all events in each category
3. calculate the percentage of each category's total duration in relation to the total scored time.
4. calculate the frequency of each category per 3 min. time interval

NCBRS

Behavior	*Definition*	1 sec.	2 sec.	3 sec.	4 sec.	5 sec.	6	sec.	7 sec.	8 sec.	9 sec.	10 sec.	11 sec.	12 sec.	13 sec.	14 sec.	15 sec.	16 sec.
1. High-hand movement	Hands or hand above level of arm pits or arm's extension angle less than 90° angle (on or off body) — physical restraint used																	
2. Leg movement	Any movement of legs such as kicking, lifting, postural change, to move to prone position — physical restraint used																	
3. Crying	Pure crying, or screaming, whining or sobbing; or crying, etc. while asking for parents, asking to stop, etc. (If any doubt over fact that a verbal protest was crying or noncrying, it should be scored as crying protest.)																	
4. Oral-physical resistance	Choking, gagging, coughing, mouth closing, spitting, vomiting, etc.																	
	Mouth closing — rate by oral request to open in any treatment segment																	
	Refusal to open mouth — rate by request to open in any treatment segment																	

Behavior Profile Rating Scale (BPRS)

The Behavior Profile Rating Scale (BPRS) is a record of specific types of behavior often associated with fear during dental treatment. To assure an accurate representation of the child-dentist interaciton, the entire treatment session time is divided into three-minute intervals (represented by numbered columns of boxes.)

The function of the rater is to record the occurence of all listed behaviors by marking appropriately a box in the numbered column on the BPRS. The criteria for identification of each behavior is indicated on the functional definition sheet. Note: Once a behavior is recorded in an interval, repeat occurrences of the same behavior are ignored (as far as the scale is concerned) until the next interval.

Directly above any/each column in which injection is administered, mark "I". Also note the onset of drilling by marking a "D" above each interval column in which it occurs. When treatment is completed, circle the number of the last column considered. It is also necessary to note any outside factors which may have affected the subject's behavior and the intervals in which they occurred. Eg. The subject's mother is present, or another child is undergoing treatment and expressing fear during the rating session.

Scoring of the BPRS involves the following:

1) Record total frequency of any marks in each category of child's behavior.
   Eg. Eyes closed occurs during five intervals.

2) Multiply by weighting factor.
   Eg. Eyes closed has a weighting factor of 2. 5x2=10

3) Final score includes the summation of totals for all behaviors.

$$\text{Final score} = \frac{\Sigma(\text{obs.} \times \text{wt.})}{\#\text{ of intervals}}$$

The final score leaves you with average fear-related behaviors per three-minute interval.

Score the following intervals separately:

1. Injection
2. Clip and Rubberdam
3. Drill

Name_____ Behavior Profile Rating Scale Dentist_____

Rater_____

Please indicate injection, drilling and end of treatment by using I, D and circle the last session

Gen.	Child's behavior	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1	Inappropriate mouth closing																					
3	Refuse to open mouth																					
2	Eyes closed																					
2	Attempts to dislodge instrument																					
5	Patient dislodges instrument																					
1	Cries at injection																					
3	Crying																					
3	Rigid posture																					
2	White knuckles																					
2	Fidgetting																					
4	Kicking																					
5	Flinging arms																					
4	Restraints used																					
2	Verbal complaints																					
3	Verbal message to terminate																					
1	Choking																					
2	Won't sit back																					
4	Rolls over																					
4	Stands up																					
5	Refuse chair																					
5	Leaves chair																					
5	Faints																					
	DENTIST BEHAVIOR																					
	Positive contingent																					
	Positive noncontingent																					
	Aversive contingent																					
	Aversive noncontingent																					
	Neutral																					
	No response																					

Remarks:

Please rate the child's behavior in terms of the child's cooperation: good 1_____10

anxiety: g/not anxious 1_____10

Did the child exhibit any of the following behaviors:

Asks for mirror____, holds mirror____, holds cotton swab____, puts hands behind his head____, lifts leg____, slides off dental chair____, asks for straw____, holds straw____(i.e. saliva ejector) SESSION NUMBER_____

BPRS

Rating - Instructions

(See functional definitions of categories)

Scoring - Instructions

(See next page)

additional information

aam = anticipatory appropriate movement

examples: child opens mouth before or without being asked for

child holds straw and sucks mouth without being asked for

scoring sheet:

aam 1	=	aam preventative
dentist 1	=	positive contingent
dentist 2	=	positive non-contingent
dentist 3	=	aversive contingent
dentist 4	=	aversive non-contingent
dentist 5	=	neutral
dentist 6	=	no response

Coop. = add number of cooperative behaviors exhibited by the child
- asks for mirror
- holds mirror
- holds cotton swab
- asks for straw
- holds straw

Dist. = add number of disruptive behaviors
- puts hands behind his head
- lifts leg
- slides off dental chair

Behavior Profile Rating Scale

Functional Definitions

Inappropriate mouth closing--whenever dentist asks child to open mouth (wider) at least once

Refuse to open mouth--dentist either has to force patient's mouth open by hand or instrument, child is willfully uncooperative, child refuses verbally or in action

Eyes closed--any perceptible eye closing longer than a blink, including closing eyes to clear them - count as closed if eyes open in slit with no eye movement or blink

Attempts to dislodge instrument--any jerky head movement and/or jerky hand movement towards face and head

Patient dislodges instrument--any time instrument is dislodged from patient's mouth due to child's movement and/or dentist trying to avoid hurting child

Cries at injection

Crying--grunt, painful sound either with or without tears

Rigid posture--tension or stiffening of legs and arms and body including stretching

White knuckles--makes a fist, holds tightly to arms of chair, holds on to arms of dentist and/or dental assistant

Fidgetting--any nervous, repetitive hands or feet movement

Kicking--noticeable leg movement other than natural change of position or fidgetting - including bringing legs up, etc.

Flinging arms--movement of arms more than once in attempts to push dentist or dental assistant away

Restraints used--when dental assistant puts her hand across dental chair to prevent disruption, or when dental assistant holds child's hand. If routinely used, use N, if patient fought or exhibited fearful response, use Ac

Verbal complaints--must be verbal and must be intelligible such as "I want my mother", "When can I go home" or "I have to go to the bathroom"

Verbal message to terminate--direct statement requesting termination of procedure such as "Don't do it", "Don't do it to me"

Choking--coughing and/or gagging noise

Won't sit back--sitting up in chair without dentist's permission

Rolls over-turning of head and body any more than 30°

Stand up--standing or kneeling on dental chair without permission

Refuse chair--needs coaxing and/or has to be forced on chair, has to be forced to dental position initially

Leaves chair--completely out of dental chair

Faints--unconscious, not sleeping, dentist has to confirm

Dentist Behavior:

Positive contingent--dentist praises patient for having done something praiseworthy from 0-30 seconds prior to praise

Positive noncontingent--praising child with no apparent contingent behavior from child, such as, "You are a good boy"

Aversive contingent--redicules, lous voice from 0-30 seconds prior to onset of aversion

Aversive noncontingent--ridicule, loud voice for no apparent reason

Neutral--general instructions and conversations

No response--no verbal or nonverbal response

If dentist asks for signal of pain do not count as verbal complaint.

Anhang 7

STICHPROBENBESCHREIBUNG "KINDER"

Vp-Nr.	Alter	Geschl.	Rasse	SÖS	Erfahrung mit Inj.	Erfahrung ohne Inj.	PPVT	CFSS	BPChL
1	11	W	W	U	0	0	89	76	15
2	9	M	W	M	0	0	98	169	4
3	4	W	W	O	0	1	142	145	4
4	9	M	W	M	1	0	91	97	14
5	13	W	W	U	1	0	97	69	2
6	10	W	S	M	1	0	91	167	0
7	8	W	W	M	1	2	109	97	3
8	6	M	W	M	0	0	108	123	11
9	12	W	W	M	4	8	106	81	11
10	7	M	W	M	0	0	115	106	10
11	9	W	W	M	1	3	90	181	4
12	9	W	W	M	1	6	96	192	4
13	8	W	S	M	0	2	73	131	19
14	10	W	A	O	1	12	118	73	0
15	4	M	W	U	0	0	94	160	9
16	11	M	S	U	1	1	85	87	26
17	11	W	W	M	0	1	104	114	13
18	10	W	A	O	1	1	101	69	14
19	7	M	W	M	0	3	112	103	20
20	14	W	S	U	0	0	68	167	8

Anhang 8

STICHPROBENBESCHREIBUNG "ZAHNÄRZTE"

VP-Nr.	Alter	Geschl.	Erfahrung mit Kindern	frühere Beh. eines Problemkindes	eigene Kinder	Kontakt mit Kindern	Erfahrung mit Erwachsenen	beabsichtigt Kinder zu behandeln	beabsichtigt Pharmaka zu verwenden	Confidence in Child Management	Test-Angst	Rede-Angst
1	33	M	0	ja	ja	-	1.J.	nein	-	153	1	3
2	25	M	0	nein	nein	-	2.J.	ja	ja	157	4	3
3	24	M	0	ja	nein	-	1.J.	ja	nein	126	0	14
4	28	W	2	ja	nein	0	2.J.	ja	ja	115	0	10
5	32	W	0	nein	Ja	-	1.J.	ja	ja	132	3	3
6	25	M	0	nein	nein	-	1.J.	ja	nein	160	2	13
7	25	M	1	ja	nein	-	1.J.	ja	ja	169	5	13
8	29	M	0	ja	nein	-	1.J.	ja	ja	114	16	1
9	25	W	0	nein	nein	1	1.J.	ja	ja	81	0	15
10	26	M	1	nein	nein	2	1.J.	ja	ja	146	1	2
11	29	M	0	nein	nein	0	2.J.	ja	ja	136	2	5
12	23	M	1	nein	nein	0	1.J.	ja	ja	107	1	11
13	23	M	2	nein	nein	1	1.J.	ja	ja	116	2	10
14	25	W	1	ja	nein	0	2.J.	ja	ja	90	15	15
15	28	W	1	nein	nein	0	2.J.	ja	ja	132	0	7
16	25	M	1	nein	nein	0	1.J.	ja	ja	87	4	17
17	31	W	1	nein	nein	0,5	2.J.	ja	ja	62	9	7
18	27	W	1	nein	nein	0	1.J.	ja	ja	158	2	15
19	24	M	1	ja	nein	3	1.J.	ja	nein	139	1	9
20	24	M	0	nein	nein	0	1.J.	ja	ja	135	3	8

Anhang 9

Test Anxiety (TA)

Key

T 1. While taking an important exam I find myself thinking of how much brighter the other students are than I am.

T 2. If I were to take an intelligence test, I would worry a great deal before taking it.

F 3. If I knew I was going to take an intelligence test, I would feel confident and relaxed, beforehand.

T 4. While taking an important examination, I perspire a great deal

T 5. During course examinations, I find myself thinking of things unrelated to the actual course material.

T 6. I get to feel very panicky when I have to take a surprise exam

T 7. During tests, I find myself thinking of the consequences of failing.

T 8. After important tests, I am frequently so tense that my stomac gets upset.

T 9. I freeze up on things like intelligence tests and final exams.

T 10. Getting a good grade on one test doesn't seem to increase my confidence on the second.

T 11. I sometimes feel my heart beating very fast during important tests.

T 12. After taking a test, I always feel I could have done better than I actually did.

T 13. I usually get depressed after taking a test.

T 14. I have an uneasy, upset feeling before taking a final exam

F 15. When taking a test, my emotional feelings do not interfere wit my performance.

T 16. During a course examination, I frequently get so nervous that I forget facts I really know.

T 17. I seem to defeat myself while working on important tests.

T 18. The harder I work at taking a test or studying for one, the more confused I get.

T 19. As soon as an exam is over, I try to stop worrying about it, but I just can't.

T 20. During exams, I sometimes wonder if I'll ever get through college.

This instrument is composed of 30 items regarding your feelings of confidence as a speaker. After each question there is a "true" and a "false."

Try to decide whether "true" or "false" most represents your feelings as associated with your most recent speech, then put a circle around the "true" or "false." Remember that this information is completely confidential and will not be made known to your instructor. Work quickly and don't spend much time over any question. We want your first impression on this questionnaire. Now go ahead, work quickly, and remember to answer every question.

Key (X)

1.	I look forward to an opportunity to speak in public.	T	F
2.	My hands tremble when I try to handle objects on the platform.	T	F
3.	I am in constant fear of forgetting my speech.	T	F
4.	Audiences seem friendly when I address them.	T	F
5.	While preparing a speech I am in a constant state of anxiety.	T	F
6.	At the conclusion of a speech I feel that I have had a pleasant experience.	T	F
7.	I dislike to use my body and voice expressively.	T	F
8.	My thoughts become confused and jumbled when I speak before an audience.	T	F
9.	I have no fear of facing an audience.	T	F
10.	Although I am nervous just before getting up I soon forget my fears and enjoy the experience.	T	F
11.	I face the prospect of making a speech with complete confidence.	T	F
12.	I feel that I am in complete possession of myself while speaking.	T	F
13.	I prefer to have notes on the platform in case I forget my speech.	T	F
14.	I like to observe the reactions of my audience to my speech.	T	F
15.	Although I talk fluently with friends I am at a loss for words on the platform.	T	F
16.	I feel relaxed and comfortable while speaking.	T	F
17.	Although I do not enjoy speaking in public I do not particularly dread it.	T	F
18.	I always avoid speaking in public if possible.	T	F
19.	The faces of my audience are blurred when I look at them.	T	F

20.	I feel disgusted with myself after trying to address a group of people.	X	F
21.	I enjoy preparing a talk.	T	X
22.	My mind is clear when I face an audience.	T	X
23.	I am fairly fluent.	T	X
24.	I perspire and tremble just before getting up to speak.	X	F
25.	My posture feels strained and unnatural.	X	F
26.	I am fearful and tense all the while I am speaking before a group of people.	X	F
27.	I find the prospect of speaking mildly pleasant.	T	X
28.	It is difficult for me to calmly search my mind for the right words to express my thoughts.	X	F
29.	I am terrified at the thought of speaking before a group of people.	X	F
30.	I have a feeling of alertness in facing an audience.	T	X

Anhang 11

Previous Experience Dentist

Student Name .....

1. How many adult dental patients did you treat? .....

   When did you do these treatments? .....

   What kinds of treatments did you perform? .....

2. Please rate your skills as a dentist during these treatments according to the following scales:

1	2	3	4	5	6	7	8	9	10
I feel my skills were disturbingly inadequate				I feel my skills were adequate					I feel my skills were completely adequate

1. patient	1	2	3	4	5	6	7	8	9	10
2. patient	1	2	3	4	5	6	7	8	9	10
3. patient	1	2	3	4	5	6	7	8	9	10

.....

3. Please rate your confidence in child management with your prior pedodontic patient according to the above described scale:

1. patient	1	2	3	4	5	6	7	8	9	10
2. patient	1	2	3	4	5	6	7	8	9	10

Name student	phone	name patient DR No.	student's first patient yes/no if no how many previous patients	kinds of contacts with previous (restorative...)	Miscellaneous do you have children yes/no	how many children	age/ sex	# of aver. wkly. contacts w/children

Previous Experience Dentist

PPP = prior pedo patients
no = 0
actual number

PPT = prior pedo treatments
all but restoration = 1
restoration = 2
all kinds of treatment = 3

PSR = pedo skill rating
average skill rating (mean) with prior pedo-patients

PAP = prior adult patients
0 - 10 = 1
11 - 15 = 2
16 - 20 and more = 3

When did dentist treat these adult patients

since 1 year, currently = 1
since 2 years = 2

Kinds of treatments with adults patients
see PPT

ASR = adult skill rating
average skill rating (mean) with previous adult patients

does the dentist have own children

yes = 2
no = 1

number of own children
age of own children
average weekly contacts with children

Anhang 12

Angst- und Fähigkeitsratings der Zahnärzte

Dentist .....
Session .....

Please rate your momentary performance anxiety

general	1	2	3	4	5	6	7	8	9	10
	not anxious									very anxious
injection	1	2	3	4	5	6	7	8	9	10
rubberdam	1	2	3	4	5	6	7	8	9	10
drilling	1	2	3	4	5	6	7	8	9	10

Rate Your skills during this session

1 I feel my skills were disturbingly inadequate. I do not think I was able to control the child's behavior more than 1 time in 10.
2
3
4
5 I feel my skills were adequate. I think I was able to control this behavior about every other time (5 out of 10) it occured.
6
7
8
9
10 I feel my skills were completely adequate. I was able to control the child's behavior whenever it occurred (10 out of 10)

Rate the effectiveness of the treatment

1	2	3	4	5	6	7	8	9	10
not effective at all									very effective

Let's say the main goal during this treatment that you could reach is 10.
How far did you go?

1	2	3	4	5	6	7	8	9	10

Confidence in Child Management (CCM)

Name _____

As part of your participation in this research project, we ask that you complete the following questionnaire. We wish to obtain a measure of how confident you feel at this point in working with child patients. Please answer the questions as accurately as possible. The answers you give will be kept confidential.

We are going to propose a variety of hypothetical situations which you may encounter in practice. We ask that you indicate in the manner stated below your "confidence level" in controlling that situation. Some situations may require considerable effort and skill; others may be extremely easy/simple.

Please indicate your "confidence level" by circling the appropriate number at the end of each question. The response scale is 1 to 10 and is as follows:

1	3	5	7	10
I feel my skills are disturbingly inadequate. I do note think I am able to control this behavior more than 1 time to 10.		I feel my skills are adequate. I think I am able to control this behavior about every other time (5 out of 10) it occurs.		I feel my skills are completely adequate. I am able to control this behavior whenever it occurs (10 out of 10).

1. Four year old Mark walks into the operatory with you but rejects your invitation to climb into the chair by silently shaking his head from side to side.

   Under this circumstances, I would feel:

   1 2 3 4 5 6 7 8 9 10

2. After repeated urging during prophylaxis, Flora, a four year old refuses to open her mouth after you have begun to apply pumice.

   I would feel:

   1 2 3 4 5 6 7 8 9 10

3. Seven year old Phyllis crabs your hand repeatedly in an attempt to force you to stop polishing an amalgam.

   In managing this patient I would feel:

   1 2 3 4 5 6 7 8 9 10

4. Eight year old, Pete is very withdrawn and timid. He does not respond to you at all during your examination with mirror and explorer. He just sits rigidly with his eyes closed and his mouth open.

   I would feel:

   1 2 3 4 5 6 7 8 9 10

5. After introducing yourself to three year old Suzie and asking her to come with you, she refuses tearfully and clings to her mother with both hands.

   I feel my management of this patient would be:

   1 2 3 4 5 6 7 8 9 10

6. Five year old Mike thrashes his arms and kicks his feet feet when you approach him with mirror and explorer and ask him to open wide so that you can "count his teeth".

   I would feel:

   1 2 3 4 5 6 7 8 9 10

7. Four year old Donna attempts to leave the chair during placement of rubber day.

   I would feel:

   1 2 3 4 5 6 7 8 9 10

8. Norman, aged eight, gags repeatedly when you are taking study model impressions.

   I would feel: 1 2 3 4 5 6 7 8 9 10

9. Four year old Alice climbs into the chair upon your request but begins to whimper constantly, tears running down her cheeks.

   I would feel: 1 2 3 4 5 6 7 8 9 10

10. Four year old Betty attempts repeatedly to remove the rubber dam during placement of restorative materials.

    I would feel: 1 2 3 4 5 6 7 8 9 10

11. George aged seven, attempts to leave the chair while you are taking radiographs.

    I managing this patient I would feel:

    1 2 3 4 5 6 7 8 9 10

12. Eight year old Gladys moves her head while you are preparing her tooth with a high speed handpiece.

    I would feel: 1 2 3 4 5 6 7 8 9 10

13. Jane, aged four, cries loudly and protests verbally when she is aware you are about to give her an injection.

    Under these circumstances I would feel:

    1 2 3 4 5 6 7 8 9 10

14. Six year old Gloria grabs your hand repeatedly in an attempt to force you to stop "counting her teeth" with your mirrow and explorer.

    I would feel: 1 2 3 4 5 6 7 8 9 10

15. Billy, aged eight, turns away from you and hunches up in the chair when he is aware you are about to give him an injection.

    I would feel: 1 2 3 4 5 6 7 8 9 10

16. Six year old Alex cries loudly when you are about to prepare his tooth with a high speed handpice.

    I would feel: 1 2 3 4 5 6 7 8 9 10

17. Greg, aged six, begins to thrash his arms and kick his feet when he becomes aware you are about to give him an injection.

    I would feel: 1 2 3 4 5 6 7 8 9 10

18. Eight year old Fred begins to gag or choke when you are placing the rubber dam.

    I would feel: 1 2 3 4 5 6 7 8 9 10

19. Dawn, aged six, refuses to hold onto or keep bitewings in place.

    I would feel: 1 2 3 4 5 6 7 8 9 10

20. Four year old Chuck turns away from you and hunches up in the chair when you are moving the handpiece toward his mouth to prepare a tooth.

    I would feel: 1 2 3 4 5 6 7 8 9 10

Have you had to face a child that you had difficulty with?

Yes _____ No _____

If yes, please describe the situation and what happened. What was the child doing? What did you do?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

After graduation, do you intend to treat children?

Yes _____ No _____

If yes, do you intend to use pharmaceuticals to aid in management of the child?

1. N_2O: Yes _____ No _____

   If yes, for whom? _____

   _____

2. Other drugs: Yes _____ No _____

   If yes, specify drug or type of drugs. _____

   _____

Anhang 14

Information der Kinder über die Zahnbehandlung

Questions about the Child's previous information before cleaning and before restorative treatment.

1. What are you waiting for here;
   (x) - for dental treatment
   - for a doctor

2. What does a dentist do?
   (x)-fix your teeth
   -examine your body
   -play with you

3. Why are you at the dentist today?
   -because you were a bad child
   (x)-because your teeth have to be worked on
   -because your mom wanted you to go to the dentist

4. Where are you sitting while the dentist looks at your mouth;
   (x)-in a special chair
   -on a bed
   -on a normal chair

5. How will it feel when the dentist examines your mouth?
   (x)-it will hurt a little
   -it will not hurt
   -it will feel bad

Instructions: Read the questions with the response alternatives alo d to the child.
The child has to choose one response alternative.
If the child tells you anything additional, write i t down verbatim.

Only before restorative treatment:

6. What will the dentist do today?
   -look at your teeth
   (x)-fix your teeth
   -clean your teeth

7. How do you think the dentist fixes your teeth?

Auswertung: Richtige Antworten zusammenzählen,
bei Antwort 7 alle richtigen Antwortkomponenten (drilling, filling etc.) zusammenzählen.

Illness Causality Questions

1. What makes clouds move?

2. Where does night come from?

3. How do children get sick?

4. How do children get a toothache?

5. How can children keep from getting sick?

6. When children get sick, how do they get better again?

7. How can children keep from getting bad teeth?

Instructions for Experimenter

Read the question to the child. Write down the child's answer verbatim on the questionnaire sheet. If the child says "I don't know" say: "Can you make a guess?" If the child still doesn't know, write this down. Don't give the child response alternatives!

Scoring "Illness Causality Questions"

Stage 1: "I don't know"

Stage 2: magic or circular

Stage 3: global, undifferentiated

Stage 4: answer based on concrete specific events, right but incomple

Stage 5: still concrete, but more complete answer; more basic causal connections, but not abstract

Stage 6: right answer, abstract principles, generalizations

Score the answers according to the 6 stages and write down the answers verbatim at the appropriate stage and question.

1. Calculate the mean of Question 1 & 2
   -- Physical Causality Concept
2. Calculate the mean of Question 3, 5 & 6
   -- Mecical Causality Concept
3. Calculate the mean of Question 4 & 7
   -- Dental Causality Concept

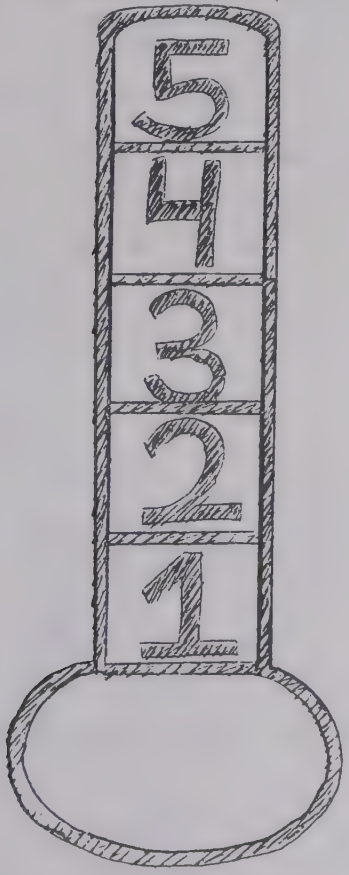
If the means are with decimal numbers, until .5 use lower stage, over .5 use upper stage.

Scoring "Illness Causality Questions"

Stage 1:	"I don't know"
	wrong answer
Stage 2:	magic or circular
Question 1:	god; the dark; sky
Question 2:	Jesus; the moon; without light; the sky; when you go to sleep
Question 3:	stuff, candy
Question 4:	before the tooth comes out; loose teeth; when they have a rotten tooth
Question 5:	taking medicine; drinking liquids; play, what mother tells them to do; by doing the thing that's right
Question 6:	play
Question 7:	go to the dentist
Stage 3:	global, undifferentiated
Question 1:	air
Question 2:	behind the sun; the other side of the world;
Question 3:	colds; catch from something; through people; catch something that's bad for them, eat
	bad stuff; weather; eat too much; from other children people pollute the air
Question 4:	candies, eat sweet s;
Question 5:	staying out of weather; don't go by people; do what mother tells them to do; washing; wearing coat ; keep their shoes on when they are going outside
Question 6:	doctor
Question 7:	bite and eat food
Stage 4:	answer based on concrete specific events, right but incomplete
Question 1:	
Question 2:	sun goes down; sun goes to the other side of the earth;
Question 3:	playing outside in the rain; without sweater in the cold; got colds from somebody else: eating; first they are allergic to
Question 4:	don't brush; from cavity; bite too hard; pulling and knocking;
Question 5:	staying in the house when it is raining; cleaning the cut; stay away from sick people; wear jackets and cover themselves; vitamins; wash foods
Question 6:	take medicine; go to a doctor; staying in bed; drinking liquids; eat right
Question 7:	brushing; not eat candy

FEAR SURVEY'S FEAR THERMOMETER

DIRECTIONS: I would like you to try and tell me how afraid you are of some things. This is a "Fear thermometer". The bottom, number one, tells me you are not afraid at all, number two tells me you are a little afraid, number three, that you are a fair amount afraid, number four, that you are pretty much afraid, and number five (the highest) tells me that you are very afraid. For each thing I say, point to the number that tells me how afraid you are.



Anhang 17

Globale Ratings

Rater_____

Session_____

Please rate the child's :

FEAR

low 1 2 3 4 5 6 7 8 9 10 high

COOPERATION

good 1 2 3 4 5 6 7 8 9 10 poor

Anhang 18

Demographische Daten und bisherige Zahnarzterfahrung der Kinder

Name: ----------

Dental chart No.: ----------

Phone: ----------

Age(birth date): ----------

Sex: ----------

Race: ----------

no. of siblings ----------

age ----------

sex ----------

profession of mother ----------

employed yes no

profession of father ----------

employed yes no

Demographical Information Child

Data Sheet

CAGE in years
CSEX female = 1
male = 2

CRACE white = 1
black = 2
hispanic = 3
other = 4

SIB sibling number

SIBLINGS-AGE older than subject = 1
younger than subject = 2
SIBAGE younger & older siblings = 3
than subject

SIBLINGS-SEX same as subject = 1
different from subject = 2
SIBSEX same & different = 3
from subject

SEL (socio-economic level)

unemployed & no profession = 0
unskilled work = 1
skilled work = 2
academic work = 3

If both man and wife are employed, add up their profession ratings and write down their professions.

Anhang 18

Previous Dental Experience Questionnaire

1. Does your child have previous experience in a dental situation? yes no
   previous dental anesthesia injection? yes no
   When was the last dental treatment with an injection?_____
   How often has your child been to the dentist before without injection_____
   with injection_____

2. How would you describe your child in these/this prior dental dental session(s), where an injection was administered?

not afraid at all				very afraid
1	2	3	4	5
very cooperative				very disruptive
1	2	3	4	5

3. Were you or anybody else present during this/these dental session(s)?
   yes no
   Who (relation to the child)_____

4. Did your child observe anyone else's dental treatment? yes no
   whose (relation to the child)_____
   if sibling: age_____
   sex_____

   relationship with child

hostility	-2	-1	0	+1	+2	tolerance
competitiveness	-2	-1	0	+1	+2	cooperativeness
amity	+2	+1	0	-1	-2	jealousy
non-supportiveness	-2	-1	0	+1	+2	supportiveness

How often did your child observe such a situation?_____
When was the last observation?_____

How did your child react to watching dental treatment being performed on somebody else?

not afraid at all				very afraid
1	2	3	4	5

Previous Dental Experience Child

1. previous dental experience, general — yes = 2, no = 1

2. previous experience with injection — yes = 2, no = 1

3. number of previous experiences with injection

4. number of previous experiences without injection

5. when was the last dental experience with injection — 0-6 months = 1, 6-12 months = 2, more than 12 months = 3

6. fear rating

7. cooperation rating

8. was a person present at previous dental visits — yes = 2, no = 1

9. did the child observe anybody else's dental treatment — yes = 2, no = 1

10. whom did the child observe — mother = 1, sibling = 2, else = 3

11. when was the last observation — 0-6 months = 1, 6-12 months = 2, 12 or more = 3

12. sibling relationship (score only if child has observed a sibling): add up all ratings

Anhang 19

Parent's Name _____

Child's Name _____

Date _____

PARENT'S QUESTIONNAIRE

1. How do you think your child has reacted to past dental procedures?

   a. very well
   b. fairly well
   c. moderately well
   d. poorly
   e. very poorly

2. How do you think your child has reacted to past medical procedures?

   a. very well
   b. fairly well
   c. moderately well
   d. poorly
   e. very poorly

3. How do you think your child will react to this procedure?

   a. very well
   b. fairly well
   c. moderately well
   d. poorly
   e. very poorly

4. How would you rate your child's anxiety (fear, nervousness) at this moment?

   a. low
   b. moderately low
   c. moderate
   d. moderately high
   e. high

5. How would you rate your own anxiety (fear, nervousness) at this moment?

   a. low
   b. moderately low
   c. moderate
   d. moderately high
   e. high

6. In the last two years, my child's contacts with dentists have been:

   a. always enjoyable
   b. usually enjoyable
   c. fair (moderate)
   d. usually unpleasant
   e. always unpleasant

7. In the last two years, my child's contacts with medical doctors have been:

   a. always enjoyable
   b. usually enjoyable
   c. fair (moderate)
   d. usually unpleasant
   e. always unpleasant

8. In the last two years my child usually looked forward to contacts with dental people:

   a. with no fear
   b. with little fear
   c. with a moderate amount of fear
   d. with much fear
   e. with very much fear

9. In the last two years my child usually looked forward to contacts with medical people:

   a. with no fear
   b. with little fear
   c. with a moderate amount of fear
   d. with much fear
   e. with very much fear

10. In the last two years my child has experienced actual physical pain in connection with dental procedures:

    a. never
    b. hardly ever (once)
    c. occasionally (two or three times)
    d. quite often (four or five times)
    e. a great deal (six or more times)

11. In the last two years my child has experienced actual physical pain in connection with medical procedures:

    a. never
    b. hardly ever (once)
    c. occasionally (two or three times)
    d. quite often (four or five times)
    e. a great deal (six or more times)

12. When I accompanied my child to the dentist I was:

a. completely reassured of his condition
b. reassured of his condition
c. moderately reassured of his condition
d. not very reassured of his condition
e. not at all reassured of his condition

13. If you observed your child during the prior 3 dental visits, how did he/she react?

a. very well
b. fairly well
c. moderately well
d. poorly
e. very poorly

a = 1

b = 2

c = 3

d = 4

e = 5

Take the following items together and add their values up:

PQZ = parent's questionnaire past dental experience
item 1, 6, 8, 10, 12,13

PQM = parent's questionnaire past medical experience
item 2, 7, 9, 11

PQA = parent's questionnaire actual treatment
item 3, 4

PQMA = parent's questionnaire mother's anxiety
item 5

Anhang 2C

Child's Name _____

Parent's Name _____

Date _____

Child Development Questionnaire (CDQ)

The following 14 items represent various situations which children often face while growing up. Please respond to each item in the way that you would deal with the situation if it arose with _____ at the present time. Even if you and your child have not faced a particular situation, please assume that the situation did arise and answer the question accordingly. There are 5 alternative responses plus an "other" for each item. Check the alternative that you would be most likely to use. Please choose only ONE response for each item. If you find it necessary to use the "other" category, write your response clearly on the line next to the word "other". Please try to limit your use of this category. Note that there are no right or wrong answers. Parents respond in various ways to different situations.

1. If I took my child to get a haircut and he absolutely refused to sit on the chair because he was frightened, I would most likely

Key 5 explain that children get their hair cut all the time and nothing bad happens to them.

2 tell my child that if he didn't sit down he'd get a mild spanking.

1 tell my child that if he sat in the chair and behaved he'd get a lollipop.

4 take my child home immediately.

3 put my child in the chair and hold him.

6 other _____

2. If my child was afraid to go near a small harmless puppy, I would most likely

3 place his hand on the puppy against his will.

4 permit him to stay away from the puppy.

2 tell him that if he did not touch the dog I would be ashamed of him.

5 pet the puppy to show him it was harmless.

1 tell him that if he touched the dog he'd make me very happy.

6 other_____

3. If I took my child to the doctor's office to get an injection and he ran out of the room when he saw the needle, I would most likely

1 tell him if he came back and cooperated with the doctor, I'd buy him an ice cream cone.

2 tell him if he didn't come back he would not be permitted to watch T.V.

3 pull him back into the room and hold him while the doctr administered the injection.

4 tell the doctor we'd come back some other time.

5 tell him that many of his friends get shots and are not afraid.

6 other_____

4. If my child woke up in the middle of the night complaining he had a bad dream and said he would not go back to bed unless his bedroom light was left on, I would most likely

2 tell him that if he did not return to bed and leave the light off, he would not be able to play with his friends.

5 allow him to leave on a small hall or bathroom light and gradually have him get used to sleeping with no light at all.

1 tell him that if went back to bed with the light off, I'd give him a special treat.

3 put him into bed and fix it so he could not turn on the light; for instance by taking out the bulb.

4 allow the light to be left on.

6 other_____

5. If while learning to ride a bicycle, my child fell off, uninjured, and would not get back on, I would most likely

4 allow him to practice some other time.

2 tell him that if he didn't learn to ride a bike, all the children on the block would laugh at him.

5 get on the bicycle myself and show him how easy it becomes with just a little more practice.

1 tell him how proud I'd be if he tried again.

3 lift him onto the bicycle seat, against his wishes.

6 other_____

6. If it was my child's first exposure to a lake or pool, and he was too frightened to go near the water, I would most likely

3 take my child and place him in the water against his will.

1 tell him that if he went into the water, I'd think he was a great swimmer.

5 gradually get him used to the water by first wetting his hands and feet.

4 permit him to stay out of the water.

2 tell him if he didn't go into the water, I'd think he was "chicken."

6 other_____

7. If my child was afraid of thunder and lightening and wanted to come into bed with me at night, I would most likely

5 tell him that thunder and lightning were only noises and lights in the far distance and could not harm him while in his own bed.

3 take him back to his room, put him to bed, and shut the door.

2 tell him that if he did not sleep in his own bed, he'd be behaving like a baby.

1 tell him that if he went back to bed, he'd be able to stay up later the next night.

4 let him sleep with me.

6 other_____

8. If, while at summer camp, my child became terribly homesick and asked to be taken home, I would most likely

2 tell him that if he didn't stop his childish behavior, all the children and counselors would be very unset with him.

5 tell him that other children go to camp and are never homesick.

4 take him home.

1 tell him that if he stayed, he would prove to everyone how very grown-up and mature he was.

3 ignore his pleas to come home and leave him at camp until it was time to return.

6 other_____

9. If my child became very frightened on the day he had to give a "show and tell" in school and said he would refuse to do it, I would most likely

4 ask the teacher to excuse my child from doing the assignment.

3 make sure he'd give his presentation, even if I had to take him to the front of the classroom.

1 tell my child that if he gave his talk, I would buy him a surprise.

5 tell my child that once in front of his class, his fear would disappear very quickly.

2 tell my child that if he didn't give his presentation, the teacher would give him a bad grade.

6 other_____

10. If my child expressed a great fear when he learned that he must go to the hospital for a tonsillectomy, and decided that he would not go, I would most likely

2 tell him that if he didn't have the operation, he would become very sick.

4 see if the operation could be postponed until a later date.

5 tell him that the hospital has excellent doctors and nurses who would take good care of him.

1 tell him that if he went to the hospital and had the operation, the family would make a party for him when he returned.

3 tell him that whether he liked it or not, he was going to the hospital.

6 other_____

11. If I took my child to get his teeth drilled, and because of his great fear was unable to sit still and cooperate with the dentist, I would most likely

1 tell him that if cooperated with the dentist, he could invite a friend to sleep that evening at our house.

3 hold him still in the chair, against his will, while the dentist drilled his teeth.

5 tell him that I've had many teeth drilled many times and that it just hurts for a short time.

4 take my child home.

2 tell him that if he did not let the dentist take care of him, his teeth would rot and perhaps fall out.

6 other_____

12. If my child refused to open a closet because he thought there was a ghost inside, I would most likely

2 tell him how shocked and disappointed I was that he would not open the door.

1 tell him that if he opened the door, I would think he was a hero.

3 take my child, unwillingly, by the hand and have him open the door.

5 open the door myself to show him no ghost existed.

4 let him leave the door closed.

6 other_____

13. If my child would not leave the house because he was afraid that the child next door would tease him and call him names, I would most likely

5 tell him that his friend is not afraid of the child next door.

2 tell him that if he didn't leave the house he would be put to bed early.

4 let my child remain in the house.

3 take him, unwillingly, outside and have him confront the child next door.

1 tell him that he went outside, he could watch his favorite TV show.

6 other_____

14. If I told my child that my spouse and I were leaving him with a friend while we went away for a few days, and he appeared very frightened and said he would not sleep in anyone's home but his own, I would most likely

3 tell him that he had no choice in the matter and had to go.

5 tell him that we'd only be gone for a few days and we'd be home before he knew it.

2 tell him that if he didn't go, we'd leave him home on the next trip that the family took together.

4 see if it was possible if a friend or relative could come to sleep with him in our own home.

1 tell him that if he went willingly, we'd all go for a Saturday outing to the park or zoo, when we returned.

6 other_____

Please answer the questions of the following example by using the space given by the dotted lines.

How did you prepare your child for this dental treatment?

- tell the child that we are going to the dentist to have his teeth fixed.
  What information did you give your child about the dental procedure?

- give my child instructions how to behave during the dental treatment.
  content of instructions: ---

- promise my child a reward for good behavior at the dentist
- tell my child that I willtake him home if he is too much afraid und feels pain
- tell my child that I will be very angry with him if he doesn't cooperate with the dentist
- other ---

CDQ

1 = positive reinforcement
2 = punishment
3 = force
4 = reinforcement of dependency
5 = modeling and reassurance

---

1. told my child that the shot might hurt a little bit, just a minute

2.

3. was asked, not to mention the injection, only talked about the good work the dentist does and that cares about Rebecca's teeth
told her to ask questions that she will understand what the dentist does und to ask if she can see
so that she can tell her younger brother

4. we told him what was going to happen exactly, that they would give him a shot, might hurt for a few sec, but he wouldn't feel anything after that
told him to sit still and be cooperative with the dentist.

5. nothing

6. told her only that she has a dental appointment at this time
Do what is necessary and be obedient

7. dentist would fix their teeth, so that they would be
8.) nice and that they are able to keep their own teeth long
they should do as they were asked

9. told her all I was told; didn't relate my own dental experiences, because they were always unpleasant
unnecessary for special instructions on behavior

10. that the dentist is there to help his teeth and that he need not to worry about getting hurt or pain

11. explained that dental care is necessary her good health and
12.) will pay off in the future

explained that filling and cleaning are necessary things and will be rewarded later

13. Do what ever the dentist tells you and he will take good care of your teeth

14. nothing

15. tell my child to follow the dentist's instructions
tell her to be cooperative

16. Only that he was going to have his teeth checked, and see what the dentist had to say
behave and cooperate with the dentist

17. that she was going, to have a tooth filled and she would have a shot that would not hurt
to do what she was told
she is old enough and doesn't have to be promised anything for being good

18. that they were going to take X-rays
that they will not hurt und that there is nothing to be afraid of
sit still in the chair and cooperate with the dentist

19. he knews what was going to happen and was anxious to come. I tried to reinforce this, I told him to try to sit as still as possible and to better do what the dentist said

20. I told her that I will talk to the dentist about the last appointment, where she felt pain afterwards
instructions to cooperate

Information Questionnaire Mother

1. There is a bright light overhead that shines:

   a. on the dentist's hands
   Xb. on my child's face

2. The dentist uses a mirror to:

   Xa. look at my child's teeth
   b. keep the light out of my child's eyes

3. The dentist uses a tool to touch my child's teeth called a:

   a. tooth buffer
   Xb. tooth feeler

4. The dentist's helper uses a tool that blows air in my child's mouth to:

   a. cool it off
   Xb. make it dry

5. A medicine is put next to the tooth to:

   Xa. put it to sleep
   b. cure it

6. The doctor gives my child an injection to:

   Xa. put his/her tooth to sleep
   b. put him/her to sleep

7. When the dentist puts the needle into my child's mouth, he/she will feel:

   a. a lot of pain
   Xb. a little pinch

8. After the injection, my child's mouth looks:

   Xa. no different
   b. swollen

9. After the injection, my child's mouth feels:

   a. like it is on fire
   Xb. real fat

10. The dentist uses a raincoat to:

a. keep the water off my child's clothes
Xb. keep the tooth dry

11. A metal ring is used to:

a. keep the tongue out of the way
Xb. put around my child's tooth

12. Holes are punched into the rubber so that:

Xa. the tooth can stick through
b. my child's tongue can stick through

13. My child's mouth feels real fat because of:

a. all the things put into it
Xb. the injection

14. The dentist uses a drill to:

Xa. clean my child's teeth
b. place the filling in my child's tooth

15. What is used to fill your child's tooth?

a. gold
Xb. silver

16. Before the filling is put into my child's mouth, is it:

a. heated
Xb. mixed

17. The filling is soft for about

a. a few minutes
Xb. one hour

18. When the doctor gives your child the injection, he asks him/her to:

a. close his/her eyes
Xb. not move

19. When the dentist puts the marking paper in the patient's the patient is asked to:

a. sit still and hold his/her breath
Xb. bite down and slide his/her teeth from side to side

20. The dentist puts a piece of marking paper between your child's teeth to:

Xa. make sure that they fit together right
b. keep his/her teeth from sliding back and forth

21. The dentist used a plier to:

a. put in the filling
Xb. take off the ring

22. The dentist:

a. does not let my child see what he is doing
Xb. lets my child see what he is doing

23. The dentist:

Xa. talks to my child
b. only talks to his helper

Auswertung: Die angekreuzten Fragen sind die richtigen.

University of Florida
College of Dentistry
Gainesville, Florida

Student/Dentist Consent for Investigational Studies

Title of Project: Behavioral Responses of Dental Students During Dental Treatment of Children

Description of studies to made:

I have been informed that the major goal of this study is to find the best way to prepare the dental student to deal with children's behavior.
During a single routine restorative treatment procedure my reactions to the child will be measured with bio-electrical monitors. At the end of the treatment I will be asked several questions regarding my feelings about the procedure. In addition, a T.V. (video) recording of the dental procedure will be made to study the student dentist and the child's reactions. There will be no benefit or financial renumeration to me for my participation in this project. All data and information obtained will remain confidential. There will be no unusual risks involved.

I have fully explained to ___ _____ _____ the nature and purpose of the above described procedure and the risks that are involved in its performance. I have answered and will answer all questions to the best of my ability.

Name and signature of person obtaining consent

_____

I have been fully informed of the above-described procedure with its possible benefits and risks and have received a copy of this description. I have given permission for my participation in this study.

I understand that I am free to withdraw this consent and discontinue participation in this project at anytime without its affecting my evaluation as a student dentist.

Student/Dentist's Name _____ Age ____ Date ___

Project Investigator _____ Date _____

Witnessed by _____ Date _____

University of Florida
College of Dentistry
Gainesville, Florida

Patient Consent for Investigational Studies

Title of Project: Behavioral Responses of Dental Students During Dental Treatment of Children

Description of studies to be made:

I have been informed that the major goal of this study is to find the best way to prepare the dental student to deal with children's behavior. My child und I will be asked questions regarding the nature of our concerns relating to dental care. My child will receive the usual und routine dental treatment provided by a student dentist und supervised by a faculty member. There will be no unusual risks involved. During a single treatment visit the student dentist's und my child's reactions will be measured electronically. At the end of the session, my child will be asked several questions regarding his or her feelings about the dental treatment. In addition, a T.V. (video) recording of the dental procedure will be made to study the student dentist as well as my child's reactions. There will be no benefit to my child beyond receiving the usual und routine dental health care.

I understand that all my questions will be answered at anytime und that all data and information abtained will remain confidential. I also unterstand that there is no financial renumeration for my child's participation. However, there will be no charge for dental treatment received during the child's involvement in the study.

I have fully explained to _____ the nature and purpose of the above described procedure and the risks that are involved in this performance. I have answered and will answer all questions to the best of my ability.

Name und signature of person obtaining consent

I have been fully informed of the above-described procedure with its possible benefits und risks und have received a copy of this description. I have given permission for my child's participation in this study.

I understand that I am free to withdraw this consent und discontinue participation in this project at anytime without its affecting my child's care.

Child's Name _____ Dental Record Number _____ Age____

Parent or Guardian's Name _____ Date____

Signature of child if 7 years or older _____ Date____

Project Investigator _____ Date____

Witnessed by _____ Date____

Mittelwerte und Streuungen
verschiedener "Kontrollvariablen"

	♂ ($\bar{X}$/S)	♀ ($\bar{X}$/S)	schwarz ($\bar{X}$/S)	weiß ($\bar{X}$/S)
Information des Kindes präventive S.	4.4/0,8	4.2/0,7	4.3/0,8	4.3/0,7
Information des Kindes restorative S.	5 /0,8	6.3/1,2	6 /1,8	5,8/1,0
globales Angstrating durch Beobachter präventive S.	3.3/2,1	1.9/1,2	2.3/1,5	2.4/1,8
globales Angstrating durch Beobachter restorative S.	6.1/2,5	3.5/2,7	5.6/2,9	4.1/3,1
globales Kooperationsrating durch Beobachter präventive S.	3.3/2,1	1.7/1,0	1.8/0,7	2.4/1,9

Zusammenhang zwischen Versuchspersonen-Charakteristika und physiologischen Reaktionen der Zahnärzte

	Herzrate des Zahnarztes während der Ankündigung des Bohrens				Herzrates des Zahnarztes während des Bohrens				Hautleitfähigkeit des Zahnarztes während der Ankündigung der Injektion					
	hoch($\bar{X}$/S)		niedrig($\bar{X}$/S)		hoch($\bar{X}$/S)		niedrig($\bar{X}$/S)		hoch($\bar{X}$/S)				niedrig($\bar{X}$/S)	
K I N D														
Alter	9.9/1.9		8.4/3.1		8.3/2.4		10.1/2,7		8.5/2.2				10.1/3.3	
Anzahl der Kinder mit bisherigen Zahnarzterfahrungen ohne Injektion	7		4		8		3		8				5	
CFSS	142./40.3		108.7/35.7		122.2/43.2		118.1/40.0		121.0/32./				119.0/55.9	
CFSSDS	37.0/17.9		27.4/8.2		31.4/15.3		33.7/14.7		29.4/13.3				40.7/25.7	
Z A H N A R Z T														
CCM restorative Sitzung	130.9/20.8		141.2/23.3		137.8/24.7		132.7/21.2		134.7/19.7				136.6/28.6	
Anzahl der Zahnärzte mit und ohne bisherigen Kinderpatienten	mit	ohne	mit	ohne	mit	ohne	mit	ohne	mit	ohne			mit	ohne
	6	4	4	5	7	3	3	6	6	5			3	4
Angst des Zahnarztes vor der Behandlung	3.5/1.6		4.0/2.5		3.5/2.2		4.0/2.0		3.1/1.6				4.1/2.0	
Angst des Zahnarztes vor dem Bohren	2.7/1.4		1.8/0.9		2.6/1.3		1.8/0.8							
Angst des Zahnarztes vor der Injektionsgabe									3.7/1.5				3.6/3.1	

Altersverteilung der Krankheitskausalitätskonzepte

VP-Nr.	Alter	Geschl.	KAUSZ-Stufe	KAUSM-Stufe	KAUSP-Stufe
1	11	w	5	3	4
2	9	m	4	3	3
3	4	w	2	4	2
4	9	m	4	1	1
5	13	w	4	3	3
6	10	w	3	3	1
7	8	w	3	4	3
8	6	m	4	3	1
9	12	w	5	5	5
10	7	m	4	3	3
11	9	w	3	2	1
12	9	w	4	3	3
13	8	w	3	2	3
14	10	w	4	5	4
15	4	m	2	2	1
16	11	m	4	5	2
17	11	w	4	5	1
18	14	w	3	3	2
19	7	m	4	3	3
20	10	w	4	4	2

	KAUS P	KAUS Z	KAUS M
KAUS P		0,53 $p < 0.01$	0,38 $p < 0.10$
KAUS Z			0.29 $p < 021$
KAUS M			

Erläuterungen: KAUS P - Kausalitätskonzept physikalische Ereignisse
KAUS Z - Kausalitätskonzept Zahngesundheit
KAUS M - Kausalitätskonzept medizinische Gesundheit

Mittelwerte des Dental Drill Sound Tests, gemittelt über alle Kinder, absolute Herzraten

DDTS - Mittelwerte und Streuungen

Trials

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
$\bar{x}$	81,7	78,5	77,6	83,2	82,9	84,4	82,5	83,5	84,6	81,6
s	12,67	11,6	20,4	13,2	11,85	13,2	13,5	14,4	15,14	25,8

Baselines

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
$\bar{x}$	82,2	81,4	78,9	80,6	81,3	83,7	84,6	83,3	83,6	83,9
s	11,7	10,9	11,3	11,8	14,9	11,8	14,2	12,1	12.6	17,4

Voruntersuchungen mit Multipler Regression

Mit den Daten von MELAMED et al. (1982) wurde eine multiple Regressionsanalyse mit der "stepwise" Variablenselektion gerechnet.

Die Auswahl der potentiellen in die Datenanalyse eingehenden Prädiktoren erfolgte aufgrund korrelativer Zusammenhänge mit der vorherzusagenden Variable.

Die abhängige Variable war das Störverhalten der Kinder während der Behandlungssitzung nach der Präventivbehandlung.

Alter und Geschlecht der Kinder, Zahnarzterfahrung mit Injektion, Störverhalten in der Präventionssitzung, Differenzwerte für die Gefühle "Pleasure", "Control" und "Arousal" in der Präventivsitzung, globale Angst und Kooperationsratings durch Zahnärzte und Beobachter während der Präventionssitzung, allgemeine selbstberichtete Angst und Zahnarztangst der Kinder waren die potentiellen Prädiktoren.

Modelle:

BPRSTJ = AGE, SEX, BPRSTJ1, CONSAM1, HAPSAM1, EXCSAM1, GLFEOB1, GLFEDE1, GLCOOB1, GLCODE1, CFSS, CFSSDS; Stepwise

Die multiple Regressionsanalyse erbrachte folgendes Modell:

BPRSTJ = -034+1.1BPRSTJ1+0.21GLCOOB1
p<.0001 p<.14
(Standarderror 0.2) (Standarderror 0.14)

Das Störverhalten der Kinder während der Präventionssitzung sowie mangelnde Kooperation der Kinder in dieser Sitzung, eingestuft durch die Beobachter, erklären 61 % der Varianz des Störverhaltens der Kinder in der darauffolgenden Behandlungssitzung. Auch Shaw (1975) schreibt, daß zahnarztängstliche Kinder dies bereits bei den einfachsten Prozeduren, wie z.B. beim Polieren der Zähne, in der Präventivbehandlung zeigen.

Mit Hilfe dieser Gleichung wurde dann der zu erwartende Wert für Störverhalten in der Behandlungssitzung für die Daten dieser Untersuchung berechnet. Der so vorhergesagte Störwert der Kinder betrug $\bar{X}$=4,82 (s=5,02), der tatsächlich erhaltene Wert betrug 4.92 (s=2,64). Obwohl sich diese Mittelwerte nicht signifikant unterscheiden, korrelieren die vorhergesagten Störwerte der Kinder dieser Stichprobe nicht mit ihren tatsächlichen Werten, was aufgrund der großen Streuungen nicht verwunderlich ist. Aus der graphischen Darstellung wurde klar, daß drei Vpn Extremwerte für Störverhalten erzielten und somit einen signifikanten Zusammenhang von vorhergesagten und tatsächlichen Werten verhinderten.

Um mit dem in einer Stichprobe erhaltenen Modell für eine andere Stichprobe vorhersagen zu können, müssen die Standardfehler möglichst klein sein. Dies ist hier nicht zuletzt wegen der Multikollinearität der Prädiktoren nicht der Fall.

Es bestehen einige signifikante Korrelationen zwischen dem vorhergesagten Störwert und Zahnarzt- und Kinddaten in die erwartete Richtung. Dies zeigt, daß der vorhergesagte Wert doch in gewissem Zusammenhang auch mit dem Störverhalten der Kinder dieser Stichprobe steht.

- Testangst der Zahnärzte	r=.60	p< 008
- Fähigkeitsrating der Zahnärzte in der Behandlungssitzung	r=.60	p<.007
- Zunahme der Hautleitfähigkeit der Zahnärzte, wenn sie mit dem ersten Instrument im Mund des Kindes arbeiten	r=.76	p< 0006

- Verstärkung von Abhängigkeit durch die Mutter in ängstigenden Situationen für das Kind $r=.59\ p<009$
- Angstrating der Kinder in der Präventivbehandlung durch die Beobachter $r=.70\ p<001$
- Kooperationsrating der Kinder in der Präventivbehandlungssitzung durch den Beobachter $r=.59\ p<009$
- störendes Verhalten der Kinder in der Präventivbehandlung $r=.99\ p<0001$

Die mangelnde Korrelation von vorhergesagtem und tatsächlichem Störwert in der Behandlungssitzung ($r=.04\ \ p<85$) nimmt dem Vorhersagemodell also nicht jegliche Gültigkeit.

Bei der Interpretation muß neben den verschiedenen Stichproben auch das verschiedene Design der beiden Untersuchungen berücksichtigt werden. Einmal behandelten Zahnärzte der zahnmedizinischen Fakultät, das andere Mal unerfahrene Studenten.

In der ersten Studie wurden die Zahnärzte zu systematischer Verwendung bestimmter Verhaltensmodifikationsstrategien instruiert, in der zweiten fand keine Intervention statt.

Deshalb erschien es sinnvoll, diese multiple Regressionsanalyse in der aktuellen Untersuchung nochmals anzuwenden, und zwar mit verschiedenen abhängigen Variablen da sie der alltäglichen zahnmedizinischen Kinderbehandlung wesentlich näher kommt und viele Kinder nicht während der gesamten Behandlung, sondern nur während besonders ängstigenden Behandlungselementen ein Störrisiko darstellen.

Selektionsmodelle für die multiplen Regressionsanalysen
mit den jeweiligen potentiellen Prädiktoren

nur aus der Präventivsitzung:

1. BPRSTJ2= PPP, PPT, PAP, ASR, PDC, CEXJ, CEXNOJ, CFSS, HAPSAM1, EXCSAM1, CONSAM1, JUCM, JUCD, CJNFO1, BPChL, CDQ2, CDQ4, BPRSTJ1; Stepwise

2. BPRSJ= PPP, PPT; PAP, ASR, PDC, CEXJ, CEXNOJ, CFSS, HAPSAM1, EXCSAM1, CONSAM1, JUCM, JUCD, CJNFO1, BPChL, CDQ2, CDQ4, BPRSTJ1; Stepwise

3. BPRSTJR= PPP, PPT, PAP, ASR, PDC, CEXJ, CEXNOJ, CFSS, HAPSAM1, EXCSAM1, CONSAM1, JUCM, JUCD, CJNFO1, BPChL, CDQ2, CDQ4, BPRSTJ1; Stepwise

4, BPRSTJ = PPP, PPT, PAP, ASR, PDC, CEXJ, CEXNOJ, CFSS, HAPSAM1, EXCSAM1, CONSAM1,JUCM, JUCD, CJNFO1, BPChL, CDQ2, CDQ4, BPRSTJ1; Stepwise

5. GLR = PPP, PPT, PAP, ASR, PDC, CEXJ, CEXNOJ, CFSS, HAPSAM1, EXCSAM1, CONSAM1, JUCM, JUCD, CJNFO1, BPChL, CDQ2, CDQ4, GLR1; Stepwise

6. CHRPROZG= PPP, PPT, PAP, ASR, PDC, CEXJ, CEXNOJ, CFSS, HAPSAM1, EXCSAM1, CONSAM1, JUCM, JUCD, CJNFO1, BPChL, CDQ2, CDQ4,GLR1, BPRSTJ1; Stepwise

aus beiden Sitzungen:

1. BPRSTJ2= ASR, PDC, SR21, DHRPROZG, JUCM, JUCD, CJNFO2, PQD, PQM, CDQZ, CDQ4, BPRSTJ1, CHRPROZG; Stepwise

2. BPRSJ= ASR, PDC, SR21, DHRPROZ2, JUCM, JUCD, CJNFO2, PQD, PQM, CDQ2, CDQ4, BPRSTJ1, CHRPROZ2; Stepwise

3. BPRSTJR= ASR, PDC, SR21, DHRPROZ5, JUCM, JUCD, CJNFO2, PQD, PQM, CDQ2, CDQ4, BPRSTJ1, CHRPROZ5; Stepwise

4. BPRSTJD= ASR, PDC, SR21, DHRPROZ6, JUCM, JUCD, CJNFO2, PQD, PQM, CDQ2, CDQ4, BPRSTJ1, CHRPROZ4; Stepwise

5. GLR2= ASR, PDC, SR21, DHRPROZG, JUCM, JUCD, CJNFO2, PQD, PQM, CDQ2, CDQ4, BPRSTJ1, CHRPROZG; Stepwise

6. CHRPROZG= ASR, PDC, SR21, DHRPROZG, JUCM, JUCD, CJNFO2, PQD, PQM, CDQ2, CDQ4, BPRSTJ1, CHRPROZG, Stepwise

Variable - Names - Dentist

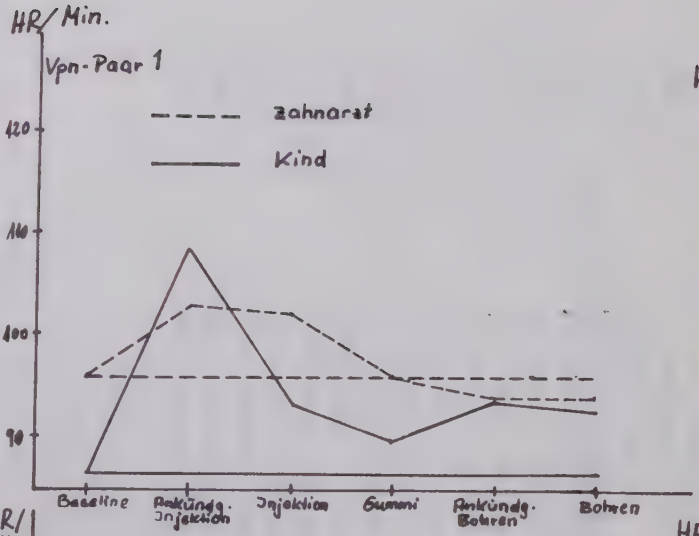
TA	Test Anxiety
PRCS	Public Response Competence Scale
PPP	No. prior pedo-patients
PPT	prior pedo-patients treatments
PSR	pedo-patients skill rating
PAP	No. prior adult patients
ASR	Adult patients skill rating
PDC	prior difficult child
GAR 1	anticipatory general anxiety rating (preventative)
SR11	Skill rating preventative (professional skills)
SR12	Skill rating preventative (efficiency of treatment)
SR13	Skill rating preventative (completeness of treatment)
GAR 2	anticipatory ge neral anxiety rating (operative)
IAR	injection anxiety rating
RAR	rubberdam anxiety rating
DAR	drill anxiety rating
SR21	skill rating operative (professional skills)
SR22	skill rating operative (efficiency of treatment)
SR23	skill rating operative (completeness of treatment)
CCM1	Confidence in child Management Scale Prev.
CCM2	Confidence in child Management Scale Operative
TL	treatment length
DHRPROZ1	dentist heart rate first instrument)
DHRPROZ2	dentist heart rate announcement of injec-)
DHRPROZ3	dentist heart rate injection tion)
DHRPROZ4	dentist heart rate metal clip) baseline
DHRPROZ5	dentist heart rate rubberdam) percent
DHRPROZ6	dentist heart rate announcement of drill)
DHRPROZ7	dentist heart rate drill)
DHRPROZG	dentist heart general (mean)
DHRB	dentist HR-frequency(absolute) baseline beginning
DHR1	dentist HR-frequency first instrument
DHR2	dentist HR-frequency announcement of injection
DHR3	dentist HR-frequency injection
DHR4	dentist HR-frequency clip
DHR5	dentist HR-frequency rubberdam
DHR6	dentist HR-frequency announcement of drill
DHR7	dentist HR-frequency drill
DHRG	dentist HR-frequency mean of DHR1 - DHR7

DGSRPR01	dentist skin conductance first instrument	baseline percent
DGSRPR02	dentist skin conductance announcement of injection	
DGSRPR03	dentist skin conductance injection	
DGSRPR04	dentist skin conductance metal clip	
DGSRPR05	dentist skin conductance rubberdam	
DGSRPR06	dentist skin conductance announcement of drill	
DGSRPR07	dentist skin conductance drill	
DGSRPRGG	dentist skin conductance mean of DGSRPR01-DGSRPR07	
DGSR1	dentist skin conductance first instrument	baseline difference
DGSR2	dentist skin conductance announcement of injection	
DGSR3	dentist skin conductance injection	
DGSR4	dentist skin conductance metal clip	
DGSR5	dentist skin conductance rubberdam	
DGSR6	dentist skin conductance announcement of drill	
DGSR7	dentist skin conductance drill	
DGSRG	dentist skin conductance mean of DGSR1-DGSR7	

Variable - Names - Child

CEXI	No. of experiences with injection
CEXNOI	No. of experiences without injection
EXPFE	fear rating of prior experiences
CFSS	Children's Fear Survey Schedule
CFSS-DS	Children's Fear Survey Schedule Dental Subscale
HAPSAM1	SAM-pleasure dimension - preventative
EXCSAM1	SAM - arousal dimension - preventative
CONSAM1	SAM - control dimension - preventative
HAPSAM2	SAM - pleasure dimension - operative
CONSAM2	SAM - control dimension -operative
EXCSAM2	SAM - arousal dimension - operative
ILLCP	Illness Causality Physical
ILLCM	Illness Causality Medical
ILLCD	Illness Causality Dental
CINFO 1	Child Information Preventative
CINFO 2	Child Information Operative
PQD	Parent's Questionnaire Dental
PQM	Parent's Questionnaire Medical
PQA	Parent's Questionnaire Actual
PQMA	Parent's Questionnaire Maternal Anxiety
BPCHL	Behavior Problem Checklist
MINFO	Mother Information
CHRB	Child heart rate general explanation)
CHR1	Child heart rate announcement of injection)
CHR2	Child heart rate injection) absolute
CHR3	Child heart rate announcement of drill) numbers
CHR4	Child heart rate drill)
CHR5	Child heart rate rubberdam)
GLFEOB1	global fear rating observer - preventative
GLCOOB1	global cooperativeness rating observer - preventative
GLFEOB2	global fear rating observer - operative
GLCOOB2	global cooperativeness rating observer - operative
GLFEDE1	global fear rating dentist - preventative
GLCODE1	global cooperativeness rating dentist - preventative
GLFEDE2	global fear rating dentist - operative
GLCODE2	global cooperativeness rating dentist - operative

BPRSTI 1	Bahavior Profile Rating Scale per time interval - preventative
BPRSTI 2	Behavior Profile Rating Scale per time interval - operative
BPRSI	Behavior Profile Rating Scale Injection (per time interval)
BPRSTJR	Clip + Rubberdam
BPRSTJD	Drill
CDQ1	Child Development Questionnaire, no. of answers for alternative 1 (pos. reinforcement)
CDQ2	Child Development Questionnaire, no. of answers for alternative 2 (punishment)
CDQ3	Child Development Questionnaire, no. of answers for alternative 3 (force)
CDQ4	Child Development Questionnaire, no. of answers for alternative 4 (reinforcement of dependen y)
CDQ5	Child Development Questionnaire, no. of answers for alternative 5 (modeling + reassurance)
CDQ6	Child Development Questionnaire,no. of answers for alternative 6(other)
CHRPROZ	Child heart rate during dental treatment in percent of pre baseline
CHRPROZ1	announcement of injection
CHRPROZ2	injection
CHRPROZ3	announcement of drill
CHRPROZ4	drill
CHRPROZ5	rubberdam
CHRPROZG	Mean of the 5 HR-percents during dental treatment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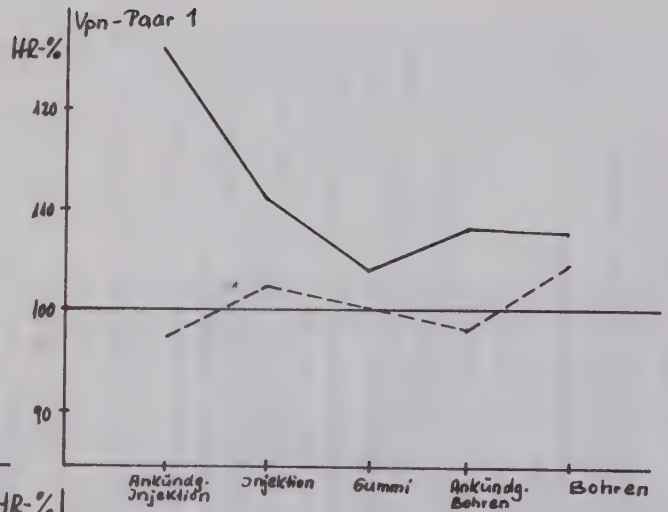
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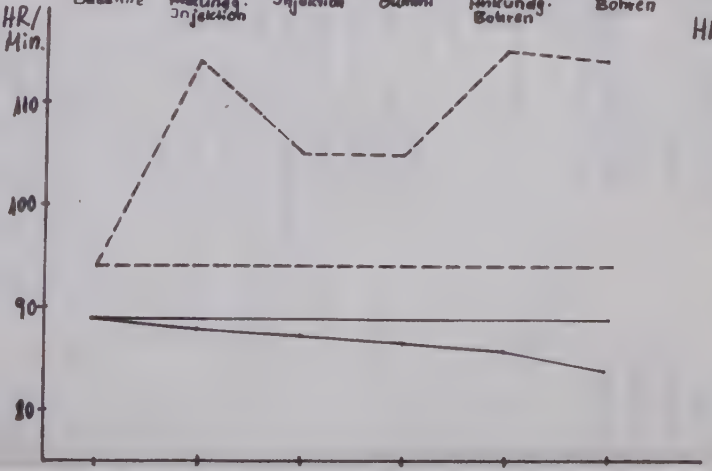
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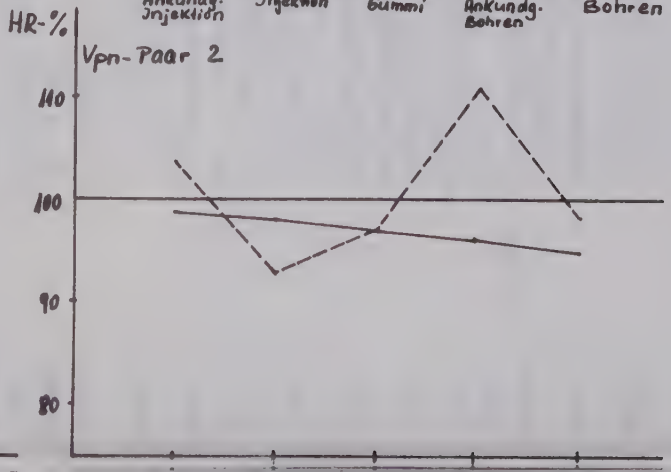
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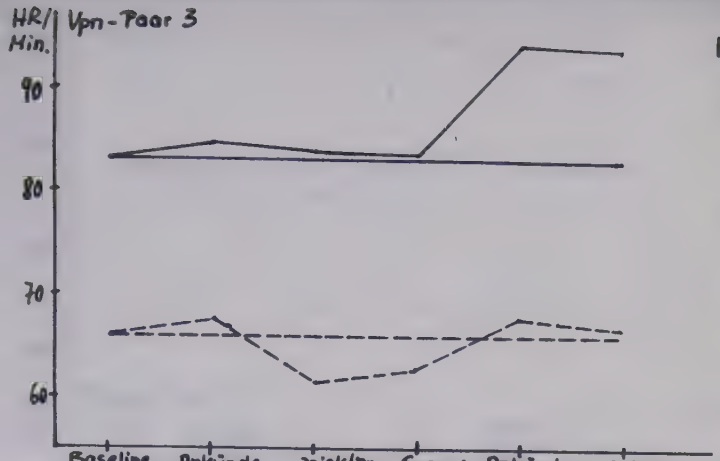
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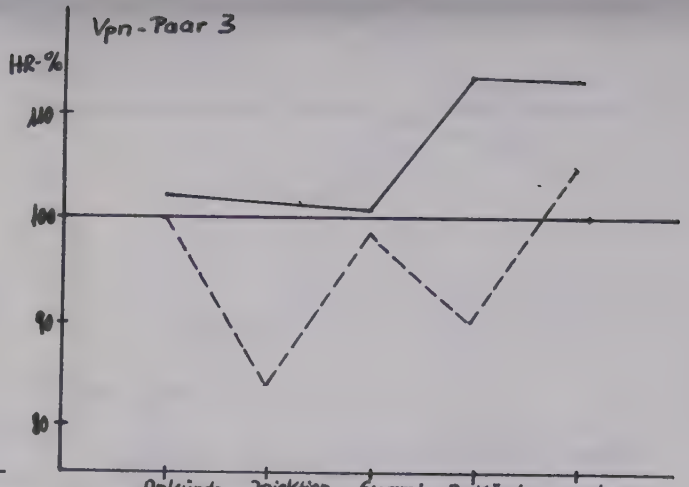
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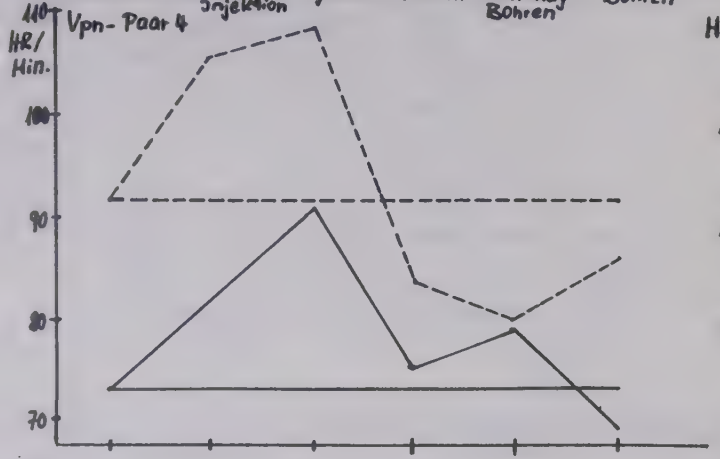
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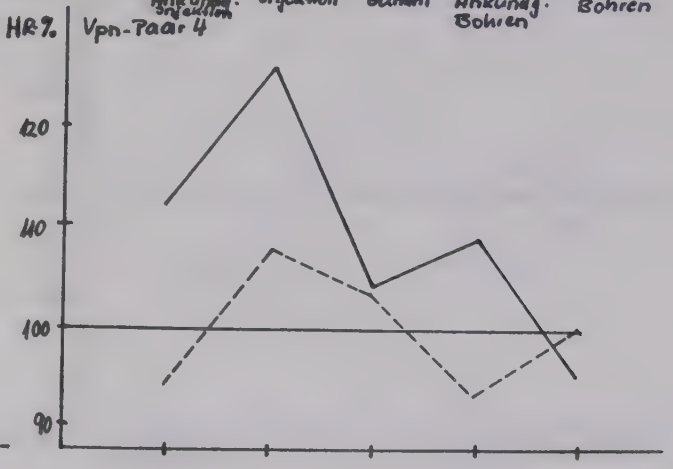
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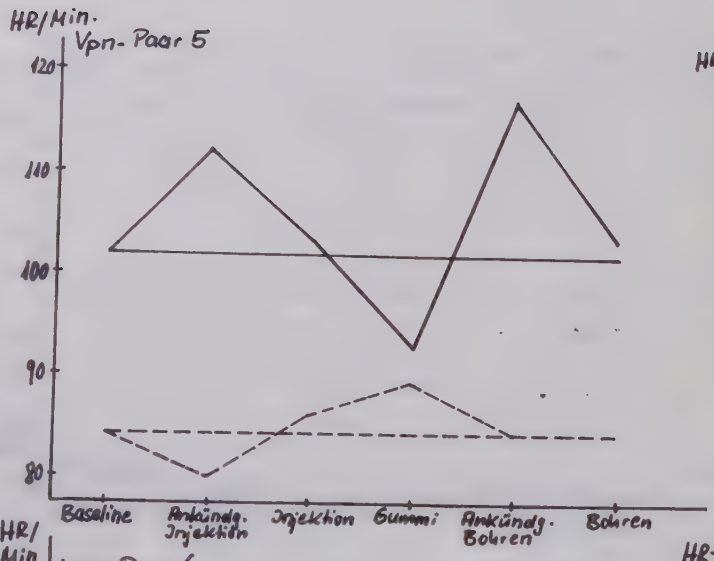
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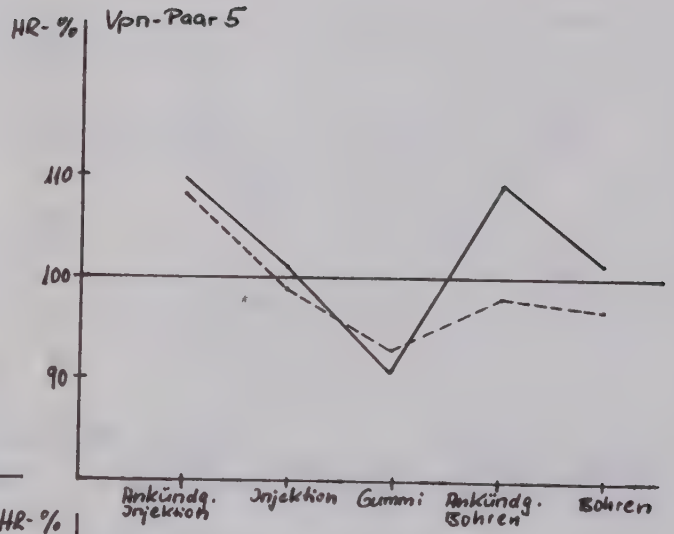
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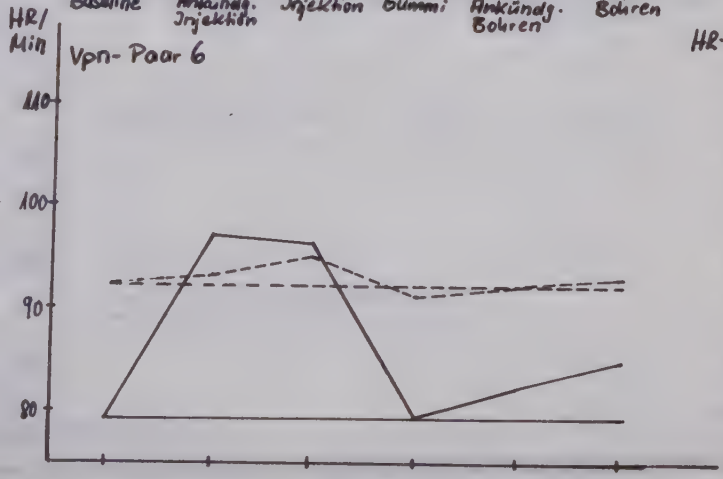
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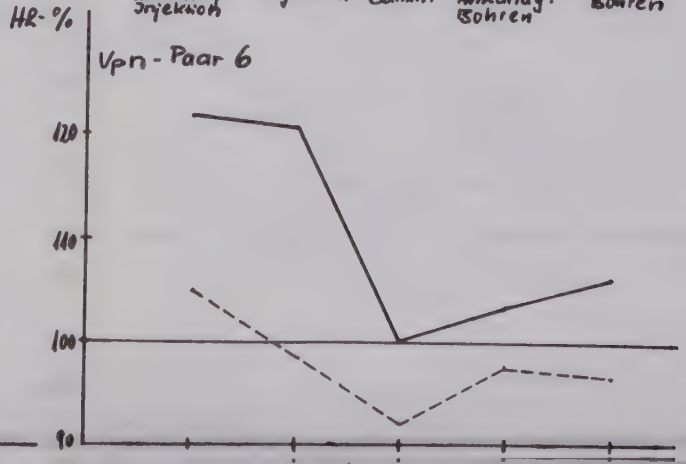
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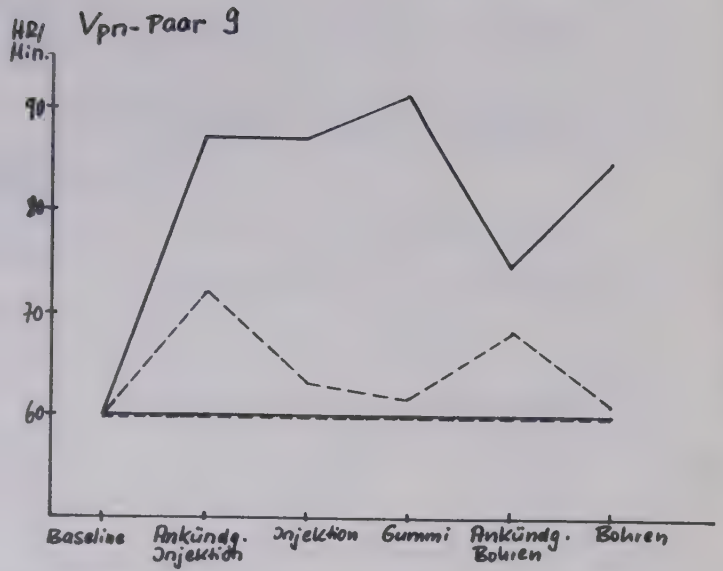
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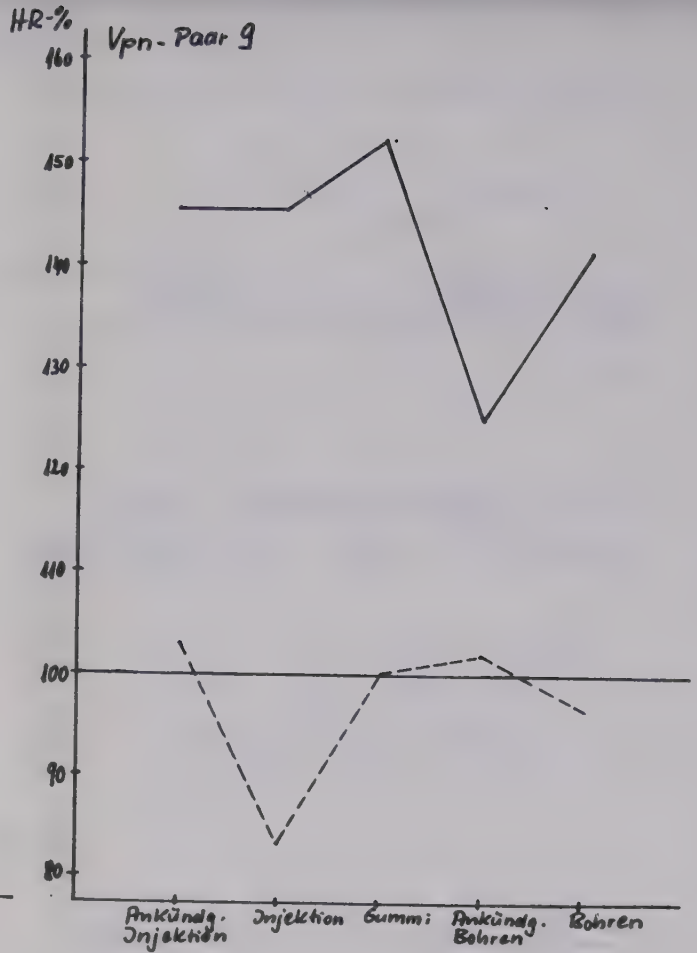
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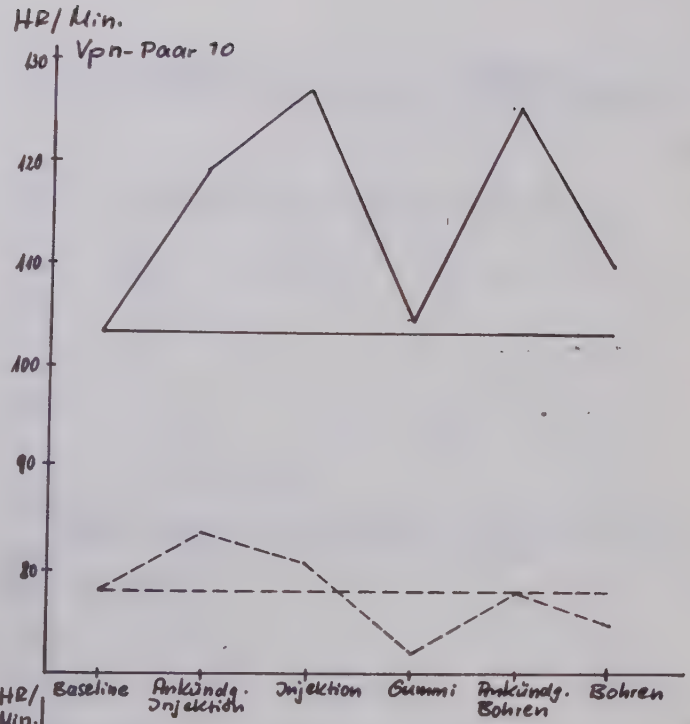
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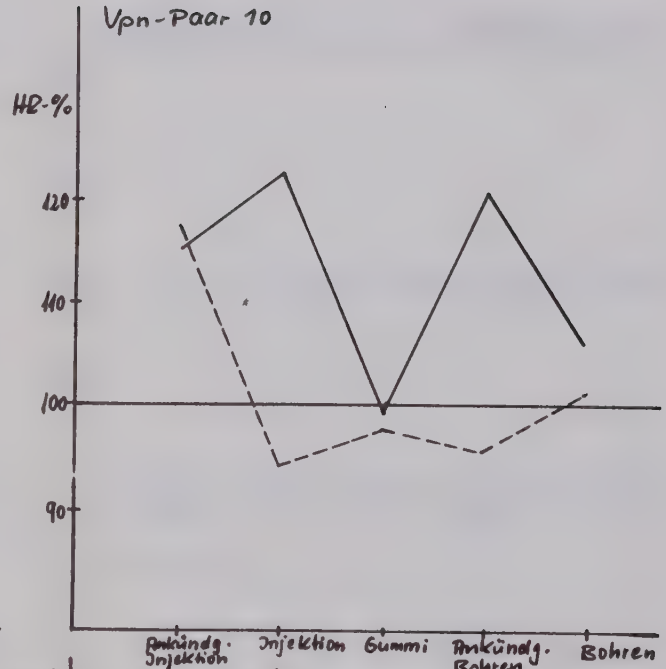
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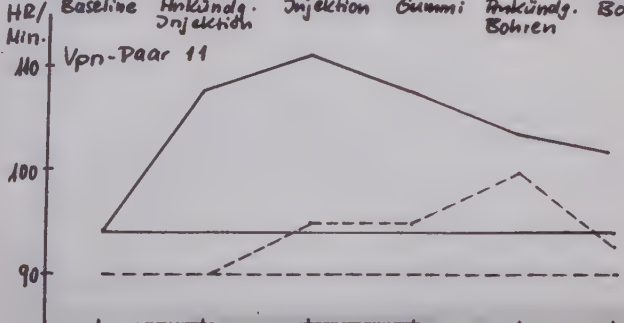
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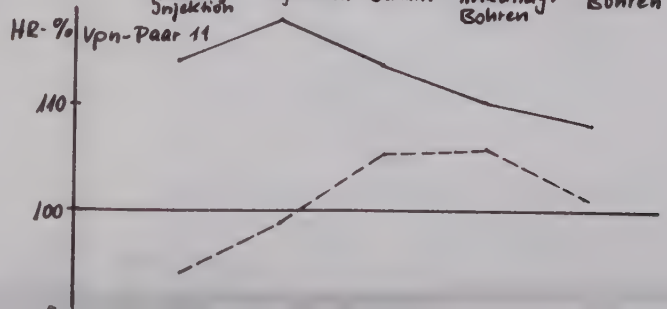
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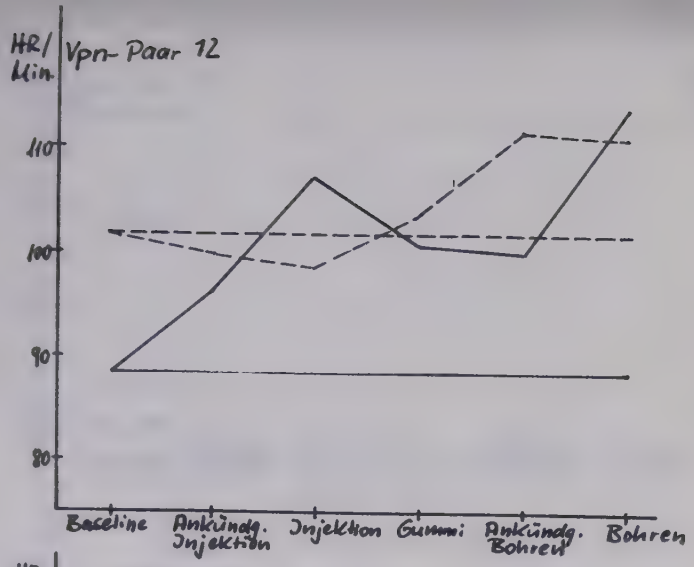
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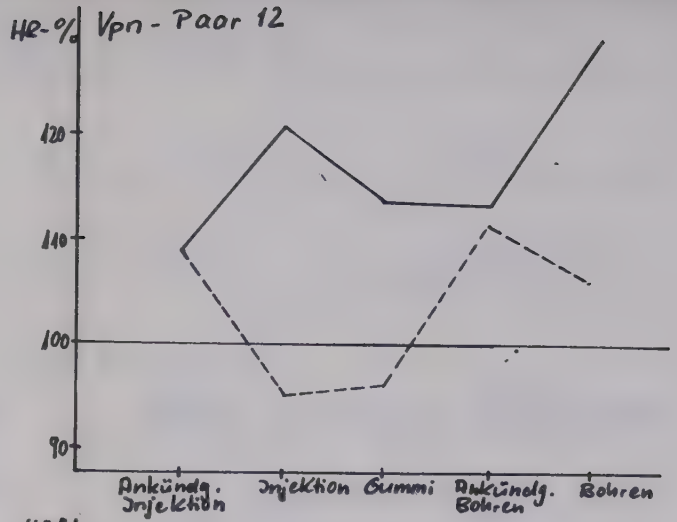
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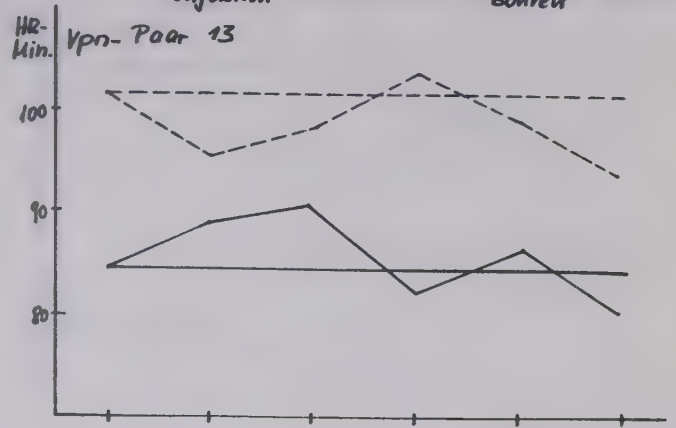
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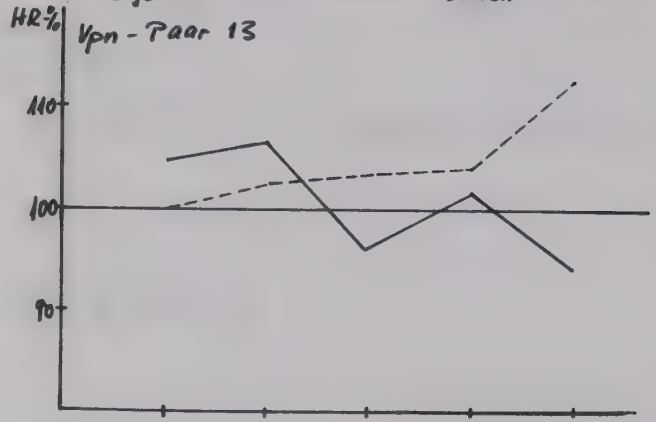
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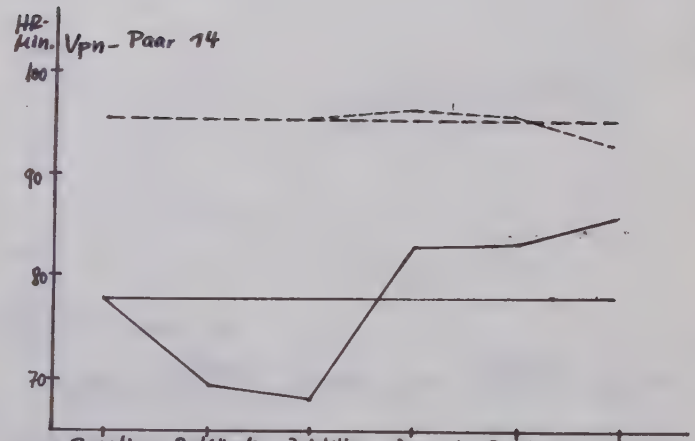
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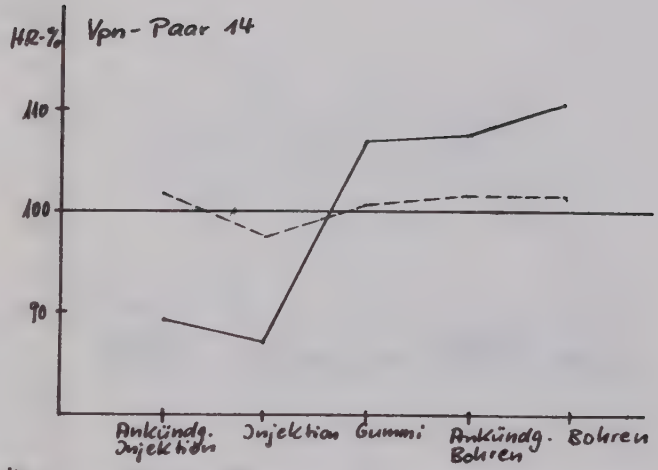
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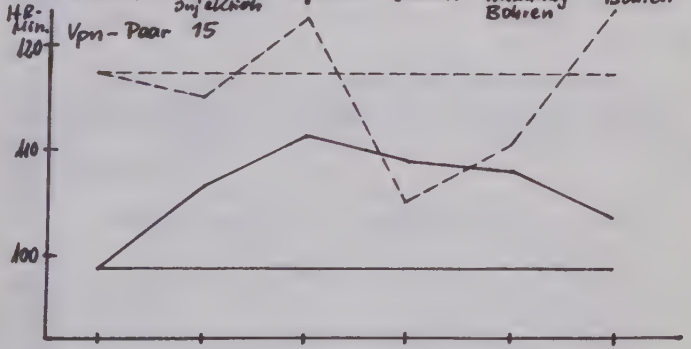
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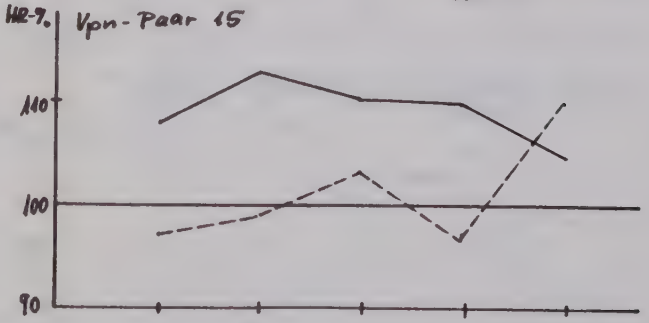
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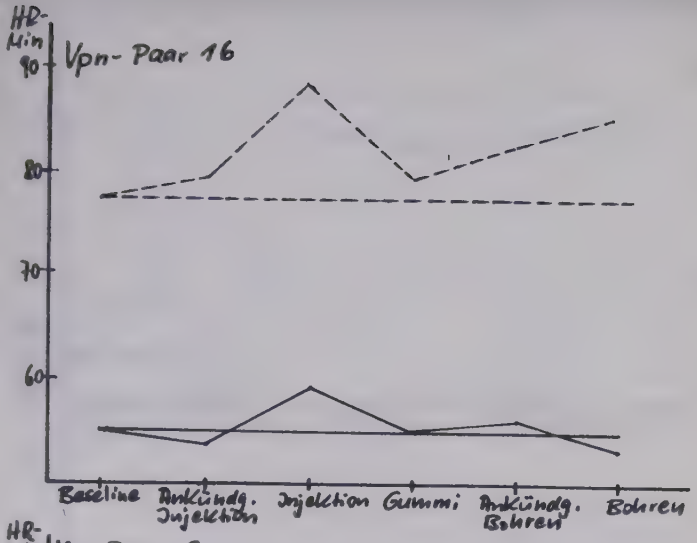
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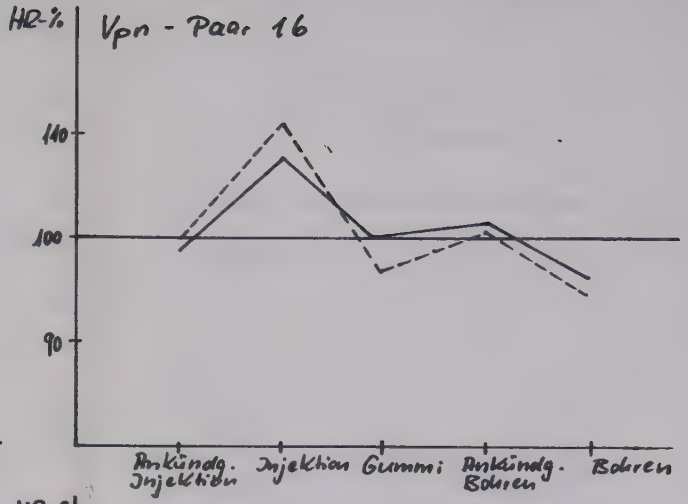
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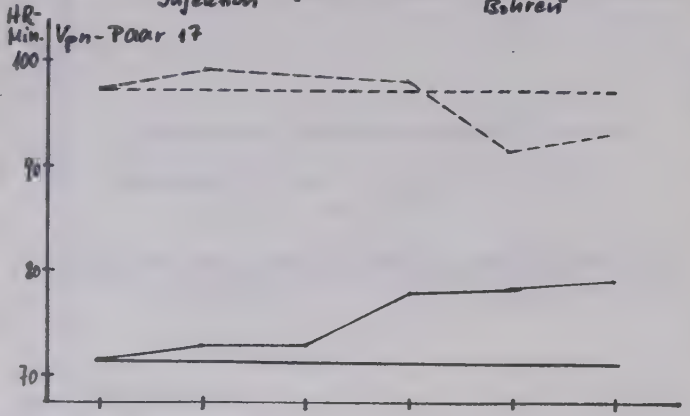
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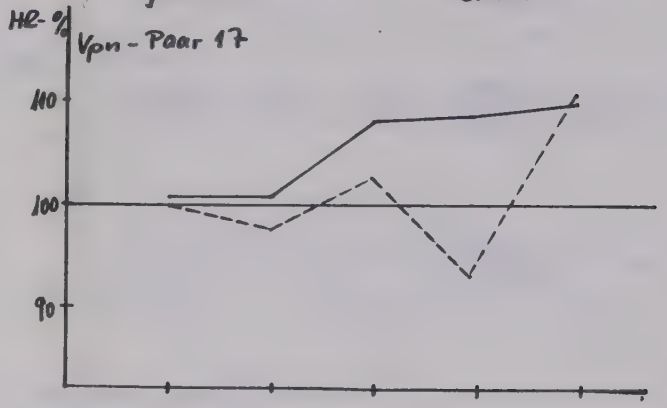
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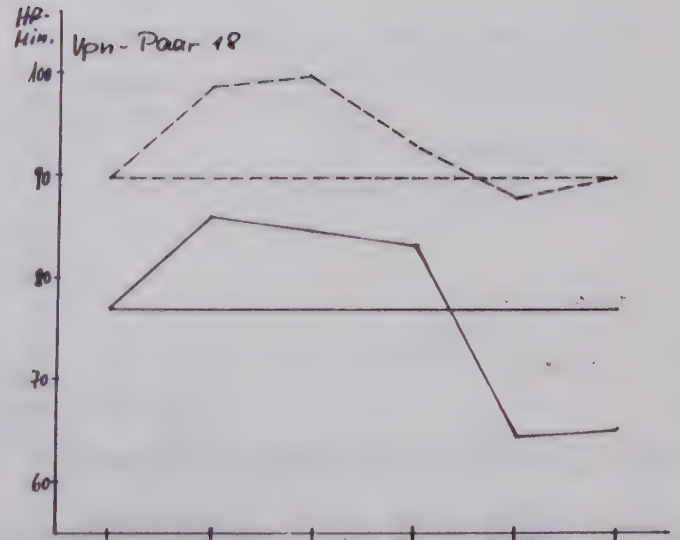
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Injektion
Gummi
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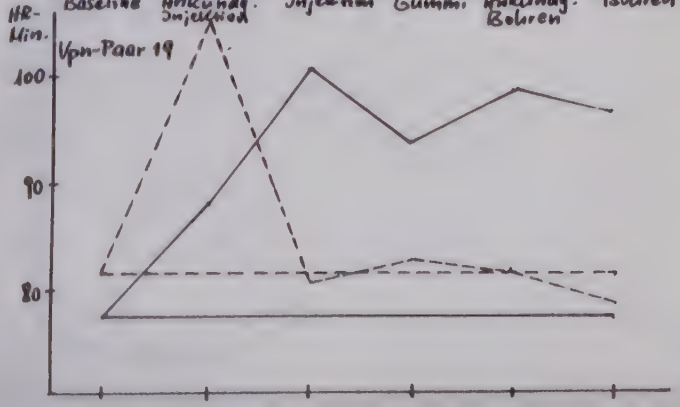
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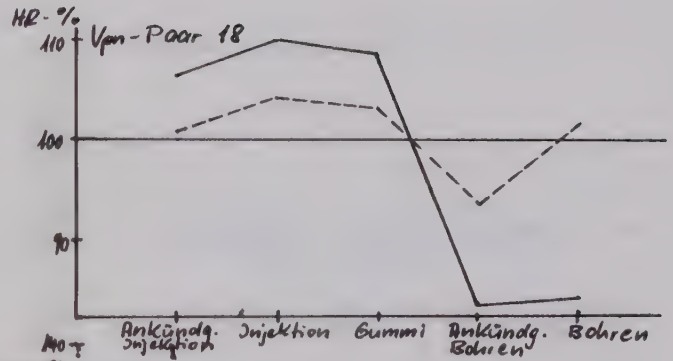
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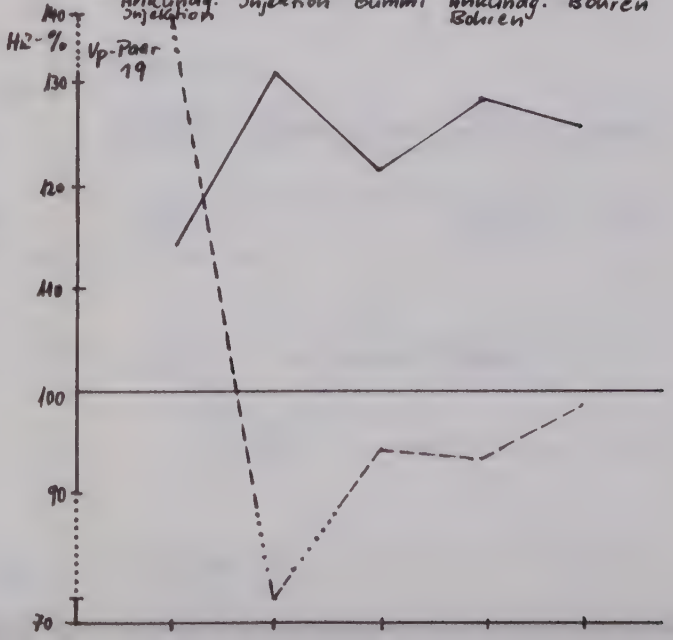
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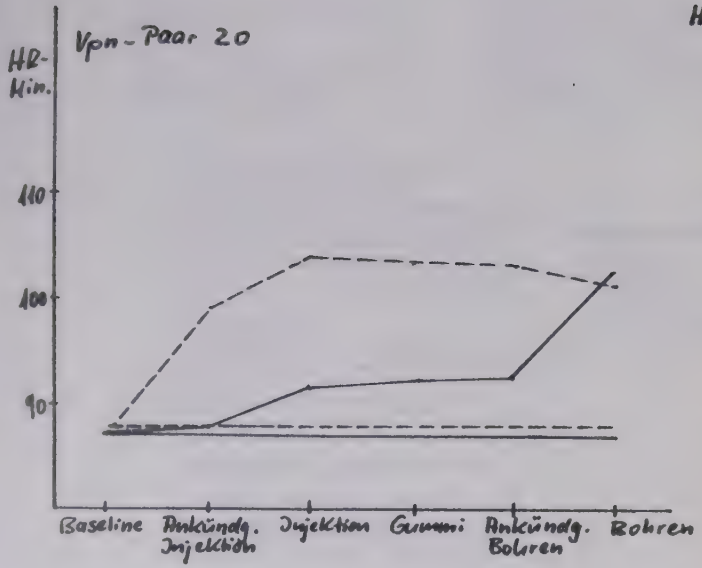
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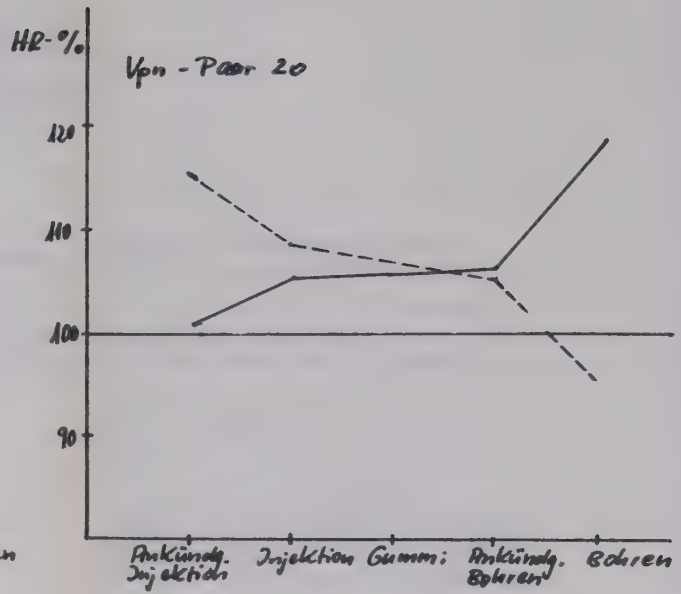
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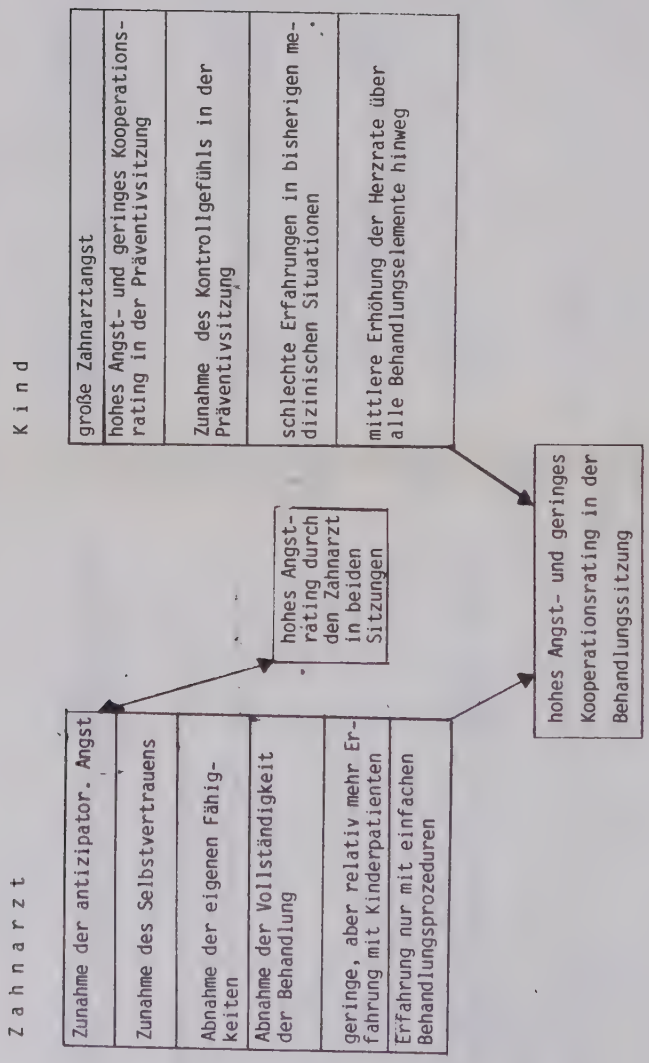
Ankündg. Injektion
Injektion Gummi
Ankündg. Bohren
Bohren

Graphische Zusammenfassung

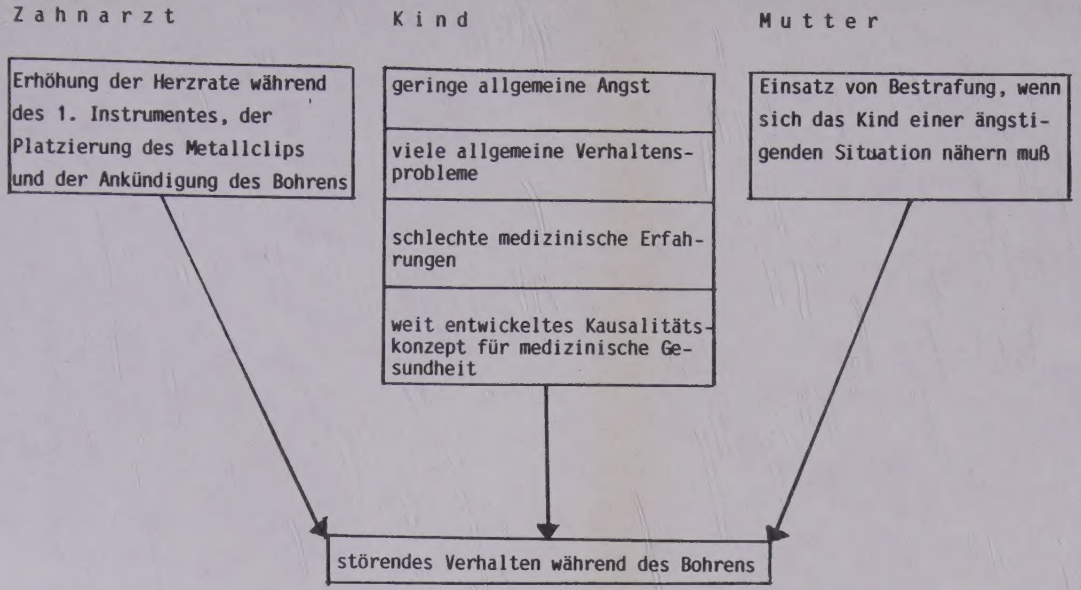
Faktoren, die das Angst- und Kooperationsrating beeinflussen

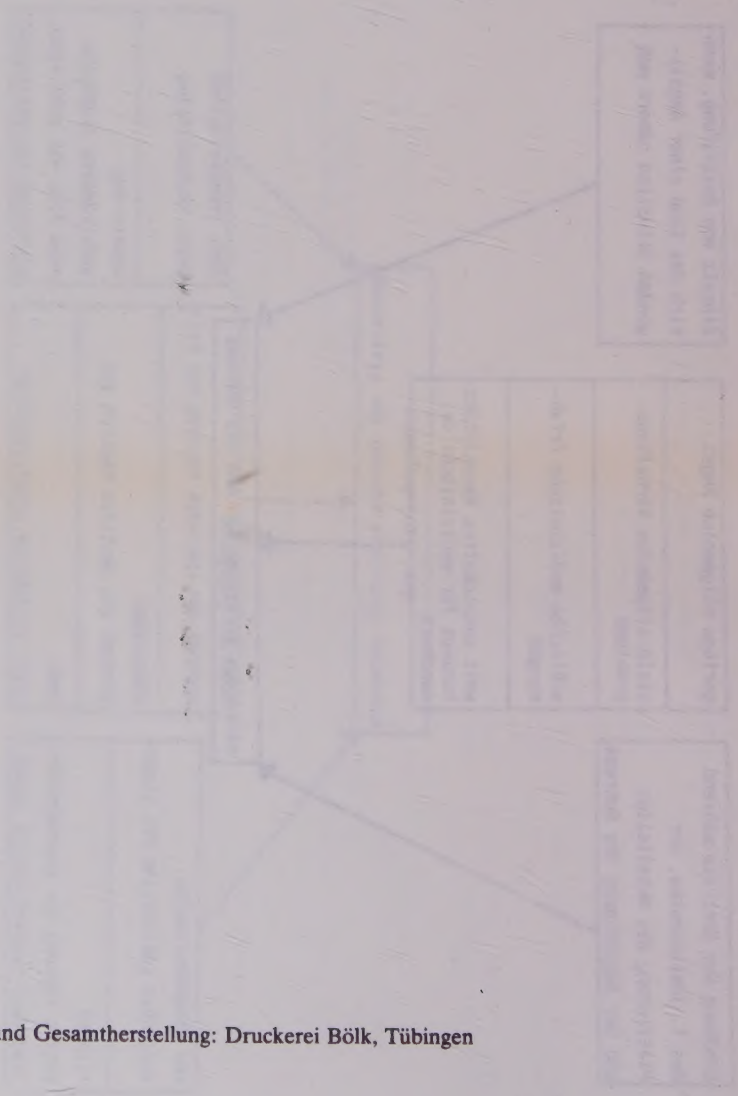


Faktoren, die das störende Verhalten während der Injektion beeinflussen

Faktoren, die das störende Verhalten während der Plazierung des Isoliergummis beeinflussen

Faktoren, die das störende Verhalten während des Bohrens beeinflussen





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